ARCHITECTURAL RECORD



BUILDING TYPES STUDY

LABORATORIES FOR INDUSTRY

226

SEPTEMBER 1955



Schlitz Brewing Company, Van Nuys, California
Archts.—Harley, Ellington & Day, Detroit, Michigan
Consltg. Struct. Engrs.—Brandow & Johnston, Los Angeles
Gen. Contr.—P. J. Walker Co., Los Angeles, California
Pozzolith Ready-Mixed Concrete supplied by Arrow Rock Co., Sun Valley, California

Architect Employs POZZOLITH...
To Improve Control of Concrete Quality...

POZZOLITH... *the key to-*

- lowest possible unit water content*
- close control of entrained air... placing consistency... rate of hardening
- reduced costs

* For a given set of materials and water-cement ratio, unit water content (water required per cubic yard of concrete) is the most important basic factor affecting the quality of concrete. A.C.I., Committee 613, 1944 Report, Page 655. Bureau of Reclamation Concrete Manual, 5th edition, Page 130.

Pozzolith has been employed, since 1932, in the construction of many architectural concrete buildings to help avoid honeycombing and other segregation defects. A better surface is obtained because of improved cohesiveness and plasticity...even when water is substantially reduced.

Architects and engineers employ Pozzolith with confidence because:

1. *proved performance*...100 million cubic yards of concrete produced with Pozzolith for all types of jobs.
2. *applied know-how*...over 70 skilled Master Builders' field technical men for product-use consultation.
3. *available everywhere*...1000 ready-mix and job-site plants now producing concrete with Pozzolith.

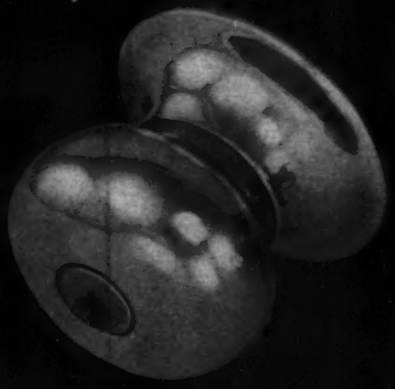
Ask us to demonstrate the advantages of Pozzolith for your project.

The MASTER BUILDERS Co

Subsidiary of American-Marietta Company

ARCHITECTURAL RECORD (Vol. 118, No. 3, September, 1955) is published monthly by F. W. Dodge Corporation, 10 Ferry Street, Concord, N. H., with editorial (Regular Edition) and executive offices at 119 W. 40th St., New York 18, N. Y. $5.50 per year; Foreign, $20.00.
Entered as second-class matter at the Post Office, Concord, N. H., March 16, 1946, under the Act of March 3, 1879.

Now—two great entry sets for *kwikset* "600" line locksets



=600 SDL



=600

These two entry sets may look alike, but the =600 SDL model, with its larger exterior knob and key-way is designed to meet dimensional requirements of Federal specifications 160.

The =600 model, at its new low price, offers greater sales value than ever before.

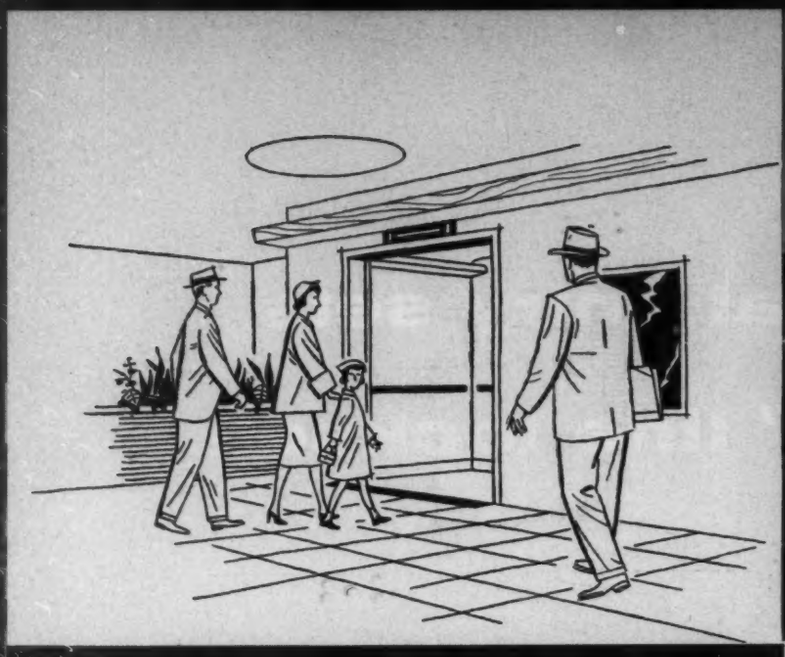
Both models feature the famous "600" line distinctive styling, quality materials and workmanship and are unconditionally guaranteed to give dependable trouble-free service.

Now you can buy Kwikset "600" line locksets to meet specifications for all finer residential and light commercial building.

Kwikset LOCKSETS® 600" LINE

A FINER LOCK FOR FINER BUILDING

Kwikset Sales and Service Company, Anaheim, California







Northwestern Mutual Fire Ass'n—Los Angeles
Architect: Richard J. Neutra

Kirk Building—Dallas
Architect: George L. Dahl



Today's buildings call for modern elevators

Rotary Oildraulic Elevators open the way to improved building designs and lower costs

Rotary Oildraulic Elevators, moved and controlled by oil under pressure, have definite architectural and operating advantages for modern buildings.

No penthouse or heavy sidewalls

The elevator car and its load are supported by the oil-hydraulic jack—not by the building structure. This eliminates the costly, unsightly penthouse that interferes with modern architectural design. It also makes possible a substantial lightening of the hoistway structure.

Flexibility in power unit location

Rotary's compact power unit can be placed in any convenient location where a pipeline can be run from the

Rotary®

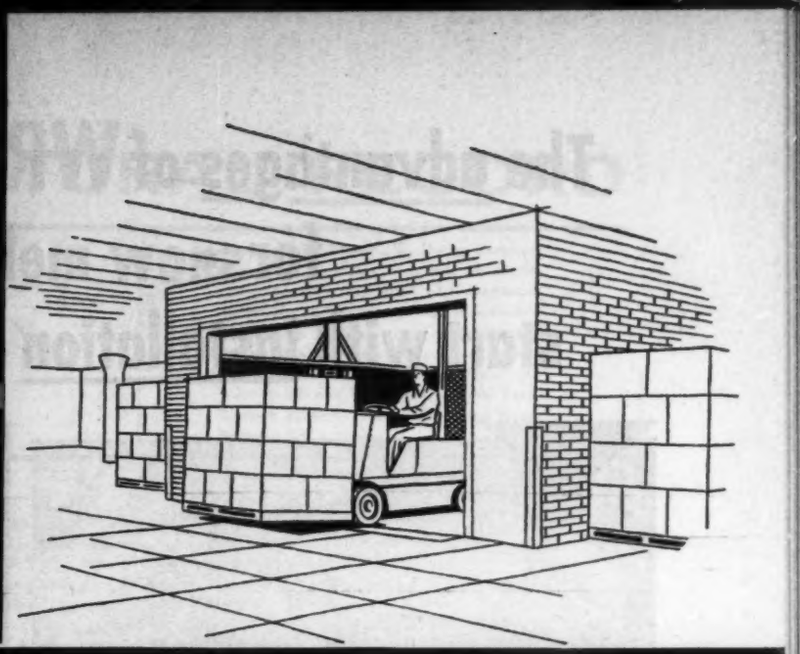
Oildraulic®

ROTARY LIFT CO.

1005 Kentucky, Memphis 2, Tenn.

SEE OUR FILE IN SWEET'S





Hampton Village Shopping Center—St. Louis
Architects: Preston J. Bradshaw, I. M. Pei

unit to the hoistway. Thus it can be located in an area with other building machinery for convenience in servicing and to save space. Or it can be placed in a small machine room built to accommodate the power unit being used on the installation.

Smooth starts, accurate landings

The revolutionary Rota-Flow oil-hydraulic power unit gives velvet-smooth starts and cushioned stops. Oildraulic automatic floor leveling positions the car to each landing with exactness—¼" accuracy guaranteed! The new patented Oildraulic Controller handles the functions of eight separate control valves . . . simplifies adjustments and maintenance.

Coast-to-coast service

More than 100,000 Rotary Oildraulic elevators and lifts have been installed and are serviced by Rotary's nationwide distributor organization. Our Engineering Department will be glad to assist you on plans and specifications for passenger or freight elevators.

Write for catalog and complete architectural data.



Atlantic Permanent Building & Loan Ass'n—Norfolk
Architect and Builder: Bank Building & Equipment Corp. of America

Illinois Institute of Technology, Chemistry Bldg.—Chicago •
Architect: Mies van der Rohe. Assoc. Architects and Engineers: Friedman, Alschuler & Sincere



Elevators

(FREIGHT OR PASSENGER)

Engineered and built by Rotary, world's oldest and largest maker of oil-hydraulic lifts.

The advantages of WROUGHT IRON PIPE for snow melting systems start with installation and continue in service





It isn't unusual at all for designers to divide the advantages of wrought iron pipe for snow melting into *installation* advantages and *service* advantages. We call them the "before-and-after" advantages of wrought iron, but regardless of title, they are mighty essential to that all-important goal—ECONOMY.

Let's take a look at what wrought iron pipe means to economy during installation. It's easily formed and welded, on the job, with standard equipment. No special techniques, no extra tools are needed for a fast, dependable job. Wrought iron pipe bends true, and is free from annoying "spring-back." This feature eliminates strain on connected equipment and speeds work. In welding or threading operations, wrought iron's uniform structure pays off in sound welds; sharp, full-depth threads, all accomplished in minimum time. Essential, too, is wrought iron pipe's strength. Users report that it has what it takes to withstand mechanical damage and doesn't require the "kid-glove" treatment.

Wrought iron pipe's superior "in service" reputation is built around three big points. First, its ability to resist corrosion, serve longer at lower cost per year, is providing satisfactory, economical operation in hundreds of snow melting installations. Second, wrought iron pipe's high rate of heat emission means maximum snow melting efficiency. Third, wrought iron pipe's coefficient of expansion, virtually identical to concrete over wide temperature ranges, bans the danger of thermal cracks, and loss of bond.

There is, of course, more to the wrought iron pipe snow melting story. Our bulletin, *Wrought Iron Pipe for Snow Melting Systems,* gives complete details. Write for your copy.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, San Francisco. Export Dept.: New York, N.Y.

BYERS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE QUALITY STEEL PRODUCTS

ARCHITECTURAL RECORD

September 1955 Vol. 118 No. 3

Copyright 1955 by F. W. Dodge Corporation, with all rights reserved. ARCHITECTURAL RECORD (combined with AMERICAN ARCHITECT and ARCHITECTURE) is published monthly by F. W. Dodge Corporation, 10 Ferry Street, Concord, New Hampshire, with editorial and executive offices at 119 West 40th Street, New York 18, New York. Western editorial office, 2877 Shasta Road, Berkeley 8, California.

STAFF OF ARCHITECTURAL RECORD

H. Judd Payne, *Publishing and Editorial Director*; **Robert F. Marshall**, *General Manager*; **John Knox Shear, A.I.A.**, *Editor-in-Chief*; **Marshall T. Ginn**, *Circulation Manager*. . . . **Emerson Goble**, *Managing Editor*; **Frank G. Lopez, A.I.A.**, *Senior Editor*; **James S. Hornbeck, A.I.A.**, *Senior Associate Editor*; **Elisabeth Kendall Thompson**, *Senior Associate Editor and Western Section Editor (Berkeley, California, Office)*; **Robert E. Fischer**, *Associate Editor (Engineering)*, **Florence A. van Wyck**, *Associate Editor*; **Jeanne M. Davern**, *Associate Editor (News)*; **Daniel M. Kelley**, *Associate Editor (Engineering Assistant)*; **Ernest Mickel, Dan Street** (*Washington*), **John Caulfield Smith, M.R.A.I.C.** (*Canada*), *Contributing Editors*; **Marjorie Blake, Grace M. Anderson**, *Assistant Editors*; **Ruth P. Watson, Helen E. Cook**, *Editorial Assistants*; **Eugene H. Hawley, Alfred Petersen**, *Design*; **Sigman-Ward**, *Drafting Consultants*: **Thomas S. Holden**, *Industry Relations Consultant*; **Clyde Shute**, *Statistical Consultant*; **George Cline Smith**, *Economics Consultant*; **Clifford Dunnells, Jr.**, *Field Research Consultant*; **Samuel C. Pace**, *Public Relations Consultant*.

TABLE OF CONTENTS

The Record Reports

Perspectives	9
Buildings in the News	10–12
Meetings and Miscellany	15–16
Architect and Building Industry Theme of British Conference	17
Reviewing the Record: The U. S. Military Academy — "A Cisatlantic Mont St. Michel"	24
A Washington Report: Slab-on-Ground Construction — BRAB Study for FHA Suggests Some Basic Standards; *By Ernest Mickel*	26
News from Canada. *By John Caulfield Smith*	28
Washington Topics	38
Construction Cost Index	42
Required Reading	46
Periodical Reports	362–366
Current Trends in Construction	402

National Air Museum

An office with a great tradition proposes a building which promises to be a mecca for tourists to Washington and a unique repository for the records and planes of an air-borne age, and a contribution to a new planning of the capital.

Building Proposed for The Smithsonian Institution. McKim Mead & White, Architects 163

Branch Library

Marina Branch, San Francisco, Calif., Public Library, Appleton & Wolfard, Architects 171

Sweden: Formula For A Successful Exhibition

Important as a design event, the Helsingborg Fair may also be significant for later fairs and their designers, offering on the one hand a comprehensible theme — modern living — and on the other, integrated design.

Helsingborg Fair; Carl Axel Acking, Bengt Gate, Torbjörn Olsson, Sven Silow, Architects 175

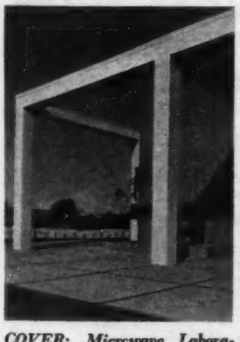
Milan Trienale Produces Ideal Showcase

Pavilion, Milan, Italy; G. Minoletti, M. Tevarotto, R. Zavanella, Architects 180

U. S. Architecture Abroad

The State Department, the American Institute of Architects and Hugh Stubbins and Associates combine to present West Berlin with a stimulating building in a most tangible gesture of international good will. A two-

Continued on next page ▶



COVER: Microwave Laboratory for G. E., Palo Alto, Calif.; John Carl Warnecke, Architect; Rondal Partridge, Photographer

ARCHITECTURAL RECORD

Continued from page 5

point-supported building, by the way, to follow M.I.T.'s three-point-supported auditorium (page F. LL. W.)
Proposed International Conference and Exposition Center; Hugh Stubbins & Associates, Architects 182

Prudential Building
South-Central Home Office, The Prudential Insurance Company of America, Jacksonville, Fla.; Kemp, Bunch and Jackson, Architects 186

Two Houses
House for Mr. and Mrs. John French, Woodstock, Vermont; E. H. & M. K. Hunter, Architects 193

House for Mr. and Mrs. Vladimir Ossipoff, Honolulu, Hawaii; Vladimir Ossipoff, Architect 197

Building Types Study Number 226 — Laboratories for Industry
Introduction 201

"Purposes, Objectives, Principles, Common Denominators". *By Frederic Pike, Ph.D.* 202

Microwave Laboratory for General Electric, Palo Alto, Calif.; John Carl Warnecke, Architect 206

IBM Engineering & Development Laboratory, Poughkeepsie, N. Y.; Eliot Noyes and Associates, Architects 210

Farm Equipment Testing and Sales Center, Dallas, Texas; Harwood K. Smith & Joseph M. Mills, Architects 212

"The Analysis of Several Laboratory Plot Plans". *By Harold C. Bernhard* 215

Automotive Engineering Building, University of Michigan, Ann Arbor, Mich.; Giffels & Vallet, Inc., L. Rossetti, Architects & Engineers 218

Textile Laboratory and Printing Plant, Greensboro, N. C.; Lowenstein-Atkinson Associates, Architects 220

Johns-Manville Research Center, Manville, N. J.; Shreve, Lamb & Harmon Associates, Architects. *Article by Clifford F. Rassweiler, Ph.D.* 222

Play "Sculpture" At Work
A sculptor who refuses to stay in his art's traditional boundaries challenges architects to join in the fun — playground inventions, in this case, designed to teach the child elementary lessons in life's adjustments, along with his fun. "Unpredictability — Margin For Inspiration". *Article By Joseph Brown*, Assoc. Professor of Sculpture, Princeton University 225

Architectural Engineering
Acoustics in Dwellings. *By Jack B. C. Purcell* 229

Barrels For A Bowling Alley 233

Product Reports 235

Roundup 236

Office Literature 238

Time-Saver Standards — Engineered Wood Design — 10, 11 & 12: Lapped Joists. *By Mel A. Barkan and Wm. J. LeMessurier* 241

Index to Advertising 404

OFFICERS OF THE F. W. DODGE CORPORATION

James McV. Breed, *Chairman of the Board;* **Paul Abbott and Thomas S. Holden:** *Vice Chairmen of the Board;* **Howard Barringer,** *President;* **Irving W. Hadsell, Chauncey L. Williams:** *Executive Vice Presidents;* **Howard M. Thompson,** *Vice President and Treasurer;* **Julius T. Little, Robert F. Marshall, T. Oliver Morgan, H. Judd Payne:** *Vice Presidents;* **Carl S. Bennett, Clinton C. Bennett, Ralph M. Hairston, Roy J. Hard, O. O. Paulsell, Richard H. Ray, John M. Williams:** *Regional Vice Presidents;* **Edwin H. Freed,** *Assistant Vice President and Comptroller;* **George Cline Smith,** *Assistant Vice President and Economist;* **Walter F. DeSaix, Clifford G. Dunnells, Jr., Clyde Shute, Marc Wayne:** *Assistant Vice President;* **Sanford D. Stockton, Jr.,** *Secretary;* **William C. Breed, Jr., George W. Morgan, Jr.:** *Assistant Secretaries;* **Irving B. Satin,** *Assistant Treasurer.*

OTHER F. W. DODGE SERVICES:

Dodge Reports — Dodge Statistical Research Services — Sweet's Catalog Services — Dodge Books — Dodge Mailing Service — Chicago Construction News — Daily Pacific Builder — Denver Daily Journal — Real Estate Record & Builders' Guide.

Member of Audit Bureau of Circulations and Associated Business Publications. Architectural Record is indexed in Art Index, Industrial Arts Index and Engineering Index.

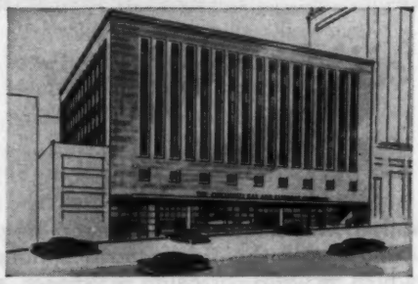
Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Subscription rates in U. S., U. S. Possessions, and Canada: $5.50 for one year, $9.00 for two years, $11.00 for three years. Elsewhere, subscriptions from those who by title are architects or engineers, $6.50 for one year, $11.50 for two years, $15.00 for three years; subscriptions from all others outside U. S., U. S. Possessions and Canada, $20.00 a year. Single copy price, $2.00. Circulation Manager: Marshall T. Ginn. Change of Address: Subscribers are requested to furnish both old and new addresses, sending if possible the stencil impression from magazine wrapper. Allow four weeks for change.



Cincinnati Gas and Electric Co., Cincinnati, Ohio *Harry Hake & Harry Hake, Jr., Architects* *Frank Messer & Sons, Inc., Builders*

Mills Movable Walls promote permanent efficiency through *Space Control* of office layouts



The Cincinnati Gas and Electric Company's handsome new office building utilizes nearly three miles of Mills movable walls, wall linings, column enclosures and railings — a complete Mills interior.

Write for the informative 68-page Mills Movable Walls Catalog—or see it in Sweet's Architectural File.

The Cincinnati Gas and Electric Company has provided for future as well as present efficiency in the use of space throughout its new building. *Space Control* has been accomplished by forming the attractive interiors with Mills Movable Walls. Whenever changing space requirements make new layouts advisable, these walls can be rearranged —quickly, easily and at very low cost—without dust, debris, commotion or interruption of normal space usage. Mills Walls combine this efficient flexibility with distinctive architectural design and structural stability. They are fully insulated and soundproofed, and require no maintenance whatever except occasional washing to keep them looking always their efficient best.

THE MILLS COMPANY • 909 Wayside Road, Cleveland 10, Ohio

MILLS *Movable* **METAL WALLS**



Aluminum grating now only slightly higher than conventional steel gratings

Borden, through many years of plant production control, can now produce aluminum floor gratings by the same commercial methods used for ordinary steel gratings. Thus the ultimate in-place cost is only slightly higher than that of conventional gratings.

Once installed, the floor gratings need never be painted and have all the advantages inherent to aluminum—which includes corrosion resistance, spark-proof and light weight.

See our catalog in Sweets

Write for complete
information on BORDEN
All/Weld, Pressure Locked, and Riveted Floor
Gratings in this FREE 8-page catalog



BORDEN METAL PRODUCTS CO.
822 GREEN LANE ELizabeth 2-6410 ELIZABETH, N. J.
SOUTHERN PLANT—LEEDS, ALA. — MAIN PLANT—UNION, N. J.

BORDEN METAL PRODUCTS CO.

Gentlemen:

Please send me BORDEN Catalog

NAME .....

TITLE .....

COMPANY NAME .....

ST. AND NO. .....

CITY AND STATE .....

THE RECORD REPORTS

PERSPECTIVES

ARCHITECTURAL INTELLIGENCE: The Quadronial House, "a split-level Colonial," is among the latest builders' offerings in Darien, Conn.

OUR READERS WRITE: What one engineer likes best about the RECORD — "It is a dynamic synopsis of the synoptic situation in the architectural field taken in logical sequence." (You-never-know-your-strength dept.)

TREND: "The most important thing to keep in mind about interior design today is comfort," the July issue of *Interior Design* advised its readers.

PUBLIC RELATIONS NOTE: "Simply beautiful, beautifully simple . . . Chevrolet's *modern beauty*, like that of modern architecture, springs from clean, uncluttered design" ran the heading for a full-page advertisement that ran in newspapers across the country a while back. The illustration featured a sketch of a Chevrolet radiator grille whose pattern bore an unmistakable resemblance to the fenestration of a tall building slab in the background.

IT MUST HAVE BEEN THE HEAT," *Engineering News-Record* suggested. "The House Appropriations Committee last week denied funds for construction of the new Air Force Academy on the ground that the design was too modernistic, and that Frank Lloyd Wright thought so too! The next obvious step is to commission Mr. Wright to make a 'conservative' design. At least that would be one sure way for the committee to come to the conclusion that its foray into architectural criticism was a mistake — attributable perhaps to the heat."

LATE IN JULY Mr. Wright sent the RECORD a second statement commenting on the Air Force Academy design. In the main, it repeated the views of the first (AR, August 1955, page 18), but it began as follows: "Concerning the extreme use of glass in designs for the Air Force Academy, I am reminded of the housewife up before the judge for beating her husband. She pleaded, 'Oh, judge, it wasn't so much *wot* 'e said as *the nawsty way 'e said it*.' Not so much the extreme use of glass. No, I feel the entire design has no sense whatever of the beautiful virtue of the site nor granted a thing to the nature of the occasion. The design was of the sort to be expected," etc.

THERE WAS NEVER ANY DOUBT that most Congressmen felt that if there is a time for extensive use of glass and metal in buildings, the Air Force Academy does not provide such an occasion; but, perhaps to reassure themselves about the validity of their esthetic instincts, a Senate subcommittee considering the Academy appropriation had the masonry industry in to testify. Witnesses included Harry C. Plummer, director of engineering, Allied Masonry Council; John J. Murphy, secretary, Bricklayers, Masons and Plasterers International Union of America (AFL); Neil Boldrick, vice president and general sales manager, Acme Brick Company; Gilbert E. West, Washington representative, Carthage Marble Corp. and Candoro Marble Co.; Charles Penn, vice president, Indiana Limestone Corp.; Robert C. Cradock, president, Stone Center Inc.; and John Taheny, president, Mason Contractors Association of America. Their views are reflected in these excerpts from their testimony: "In my 20 years' experience in this field, I have never met one responsible person, designer or engineer, who ever claimed that metal or glass could compete with masonry cost" (Plummer). "For our government to go into a situation of this kind and to give any thought or consideration to putting up the monstrosities which have been demonstrated to us . . . seems impossible. We may find ourselves in the same position as you find the steel companies and the aluminum companies who have gone into that field in continually repairing and trying to make watertight these buildings" (Murphy). "Marble is also used widely today as a skin facing on buildings. An inch and one quarter marble facing can be installed for as little as $3.50 per sq ft. This is cheaper than metal, though I dislike the comparison. One does not compare the ridiculous with the sublime" (West). "Give us the plans for the Air Academy and we will give you a specific estimate on the cost of stone. It will be less than metal, far more desirable, and the first cost will be the last" (Penn). "This is not a modern design but a crude neglect of decades of progress by the architect and mechanic. . . . I strongly urge that this Air Force Academy be planned and built as a national shrine which will endure forever. Stone symbolizes the beauty of the ages" (Cradock). "I just want to assure this committee that if masonry materials are used in any way, shape or form, we have available in this country at least 2000 contractors with the tools, the staff, the know-how, that are ready and willing to build this Air Academy in masonry" (Taheny).

BEFORE A CONFERENCE COMMITTEE in the last days of the Congressional session restored $20 million of the $79 million which had been requested by the Air Force to start construction of the Academy, architects Skidmore, Owings & Merrill had presented before both House and Senate subcommittees revised (though not final) plans which Mr. Owings testified represented a reduction of "80 to 90 per cent" in glass areas.

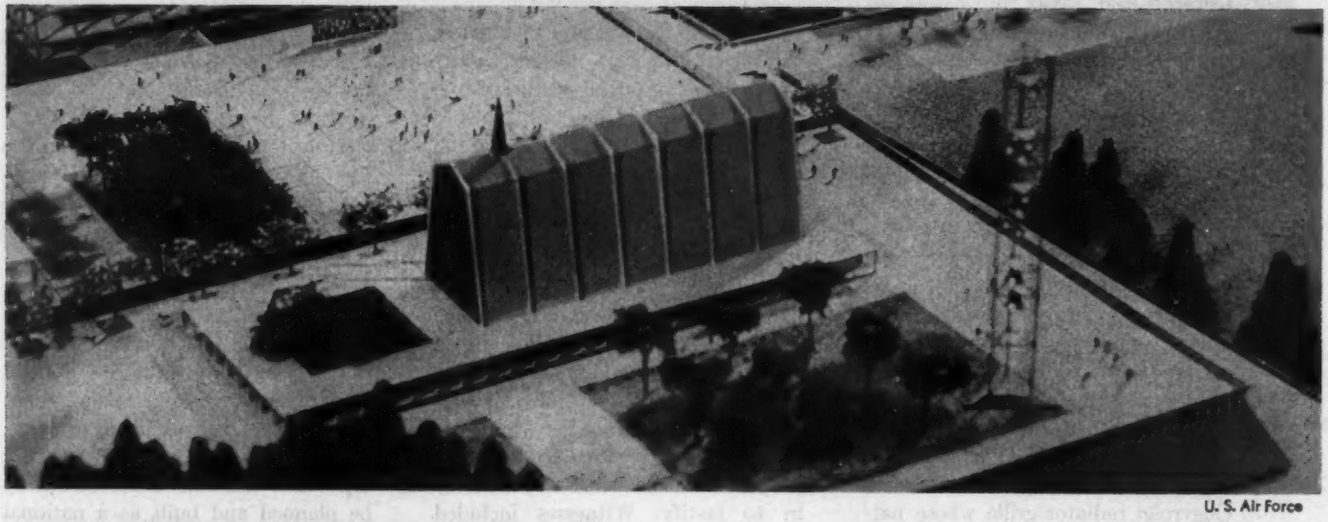
THE RECORD REPORTS

BUILDINGS IN THE NEWS

LE CORBUSIER'S FIRST CHURCH was dedicated in June at Ronchamp, a tiny village in the foothills of the French Vosges long known to devout pilgrims for its miraculous Madonna. The old church of Notre Dame du Haut having been destroyed in the Liberation battles of 1944, it was decided, for reasons of economy, to construct the new church of reinforced concrete, and Le Corbusier was asked to design it. He gave it a great roof made of two bent concrete bowls to dominate the "outdoor church" required for occasions when as many as 15,000 pilgrims may congregate; within, a muted light from the three towers, which serve as light wells, and the openings in the sloping concrete walls, filled with variously angled different colored glass panes

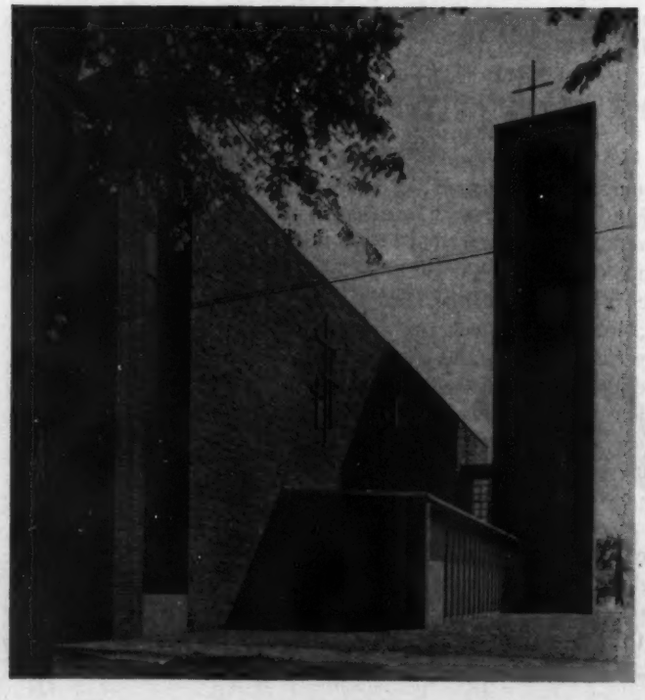


Rene Burri—Magnum

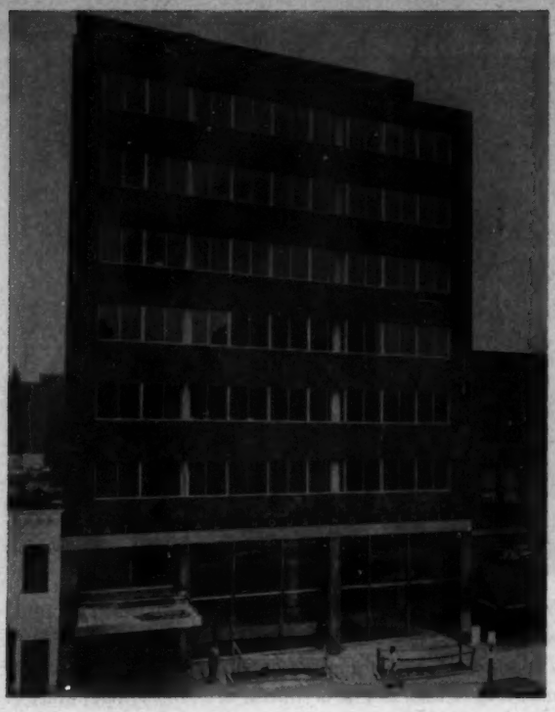


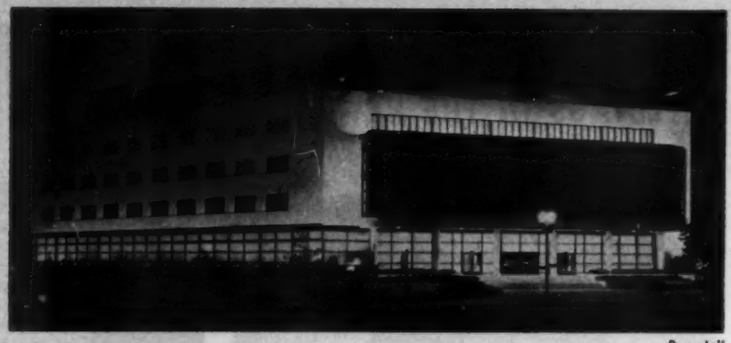
U. S. Air Force

CARDBOARD UNPLEATED — What might be called an "interim model" of the cadet chapel (photo above) turned up to replace the controversial design shown in the initial presentation last May of the basic architectural concept of the U. S. Air Force Academy by architect-engineers Skidmore, Owings & Merrill. Air Force representatives kept assuring irate Congressmen the original chapel model (AR, June 1955, facing page 172) was "nothing but pleated cardboard" — after it had been replaced Mr. Owings himself told Congressmen "this area is what you might call the real estate that has been reserved for a religious edifice." Chapel design will be left to the last

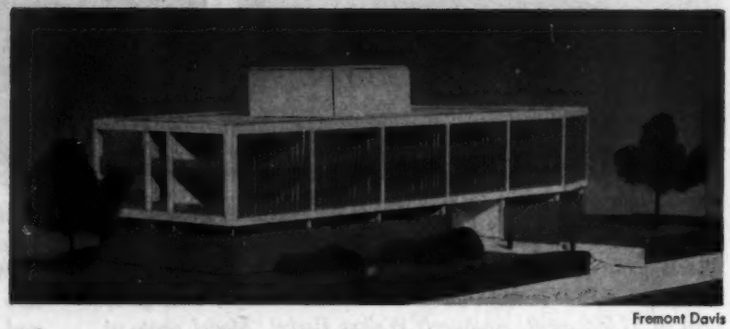


ELIEL SAARINEN'S LAST CHURCH (left) was in the news again this summer as architects in Minneapolis for the A.I.A. annual convention made the five-year-old Christ Lutheran Church a major stop on their private architectural tours. Its pastor, who liked to talk with all his visitors, estimated that nearly 400 architects visited his church during convention week





Ramsdell



Fremont Davis

IN WASHINGTON, two more headquarters buildings opened, and another recently under way. Above left: National Housing Center, new eight-story home of the National Association of Home Builders planned as an exhibit and information center for the whole homebuilding industry; Aubinoe, Edwards and Berry, architects. Top right: $5 million white marble headquarters of the International Brotherhood of Teamsters; Holabird & Root & Burgee, architects. Above right: American Association for the Advancement of Science has $700,000 headquarters under construction; Faulkner, Kingsbury & Stenhouse, architects



Gordon Somers



IN LOS ANGELES, the $4 million 13-story office building under way at 3325 Wilshire Boulevard is being built by Tishman Realty & Construction Company as an extension of its new three-building insurance center. Architect: Victor Gruen

Union Oil Company plans a $20 million center comprising a 13-story home office building and three auxiliary office and service units on a five-acre site west of Harbor Freeway overlooking downtown Los Angeles. Architects: Pereira & Luckman





IN CLEVELAND, plans for the first major downtown office building since 1930 were announced by Cleveland Electric Illuminating Company, which will erect a $17 million 22-story glass and aluminum tower on Public Square. Facing the Square will be a paved plaza 200 ft long and 65 ft deep with planting areas and reflecting pools. Architects: Carson & Lundin

(Continued on page 12)

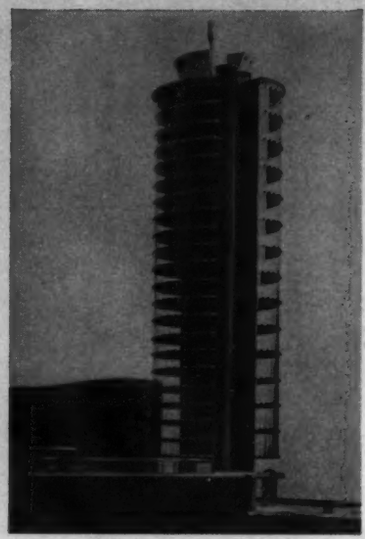
THE RECORD REPORTS

BUILDINGS IN THE NEWS

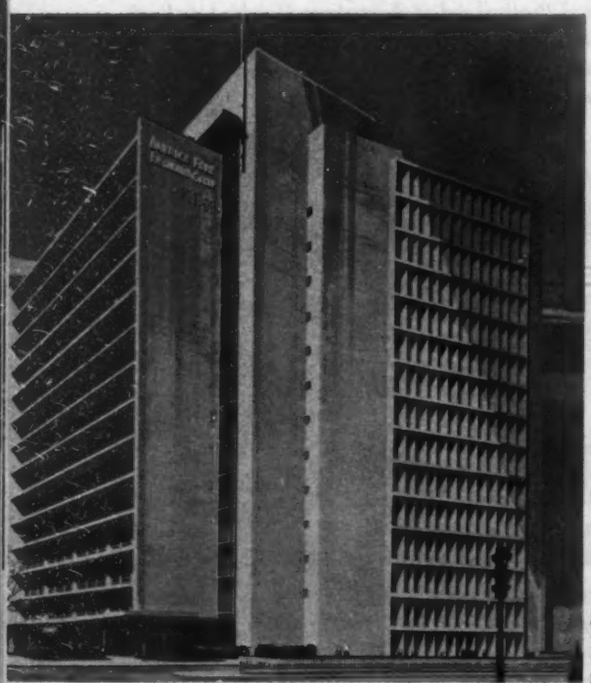
Herbert Bruce Cross





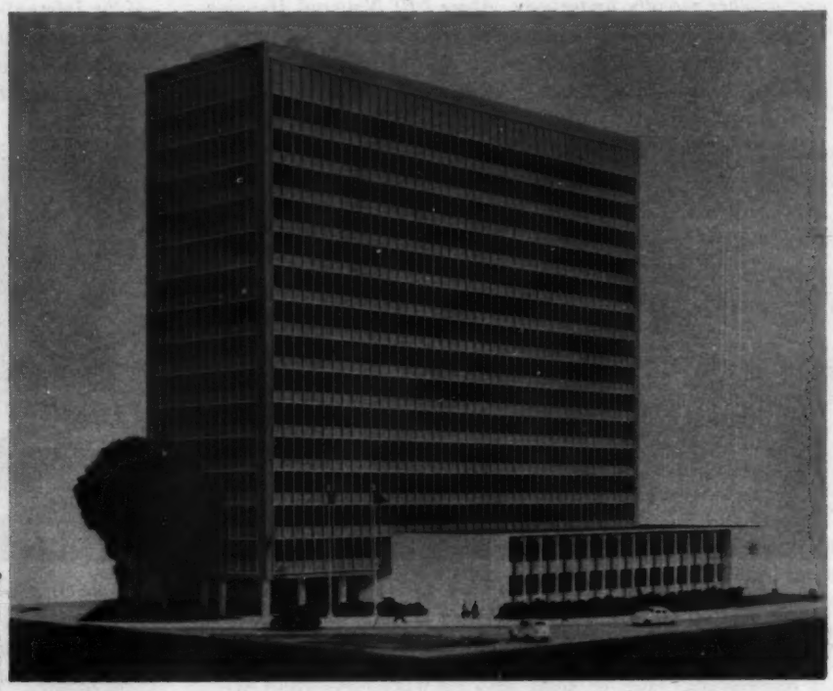


CIRCULAR OFFICE BUILDING for Capitol Records in Hollywood, Cal., to be completed late this year. Rising 12 stories above a rectangular ground floor, the $2 million structure will provide 78,000 sq ft of net usable area out of a total gross area of 92,000 sq ft. Architect: Welton Becket. Model photo at right above is shown in the August issue of the Italian Domus, *which reports "first prestressed concrete skyscraper will be built on the Italian coast." Floors would be cantilevered from a central core containing elevators. The architects are Angelo Mangiarotti and Bruno Morassutti*

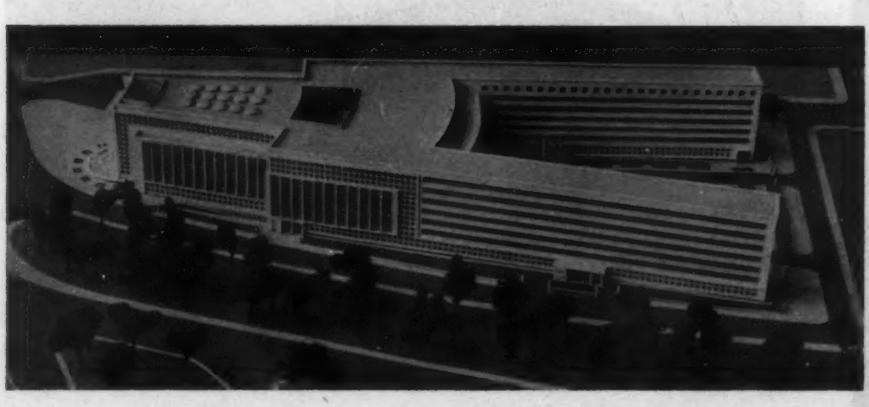


Hedrich-Blessing

IN CHICAGO, the America Fore Insurance Group is building a 14-story office building at Jackson Boulevard and Wacker Drive to house the group's western department. Fall 1956 occupancy is planned. Architects: Loebl, Schlossman & Bennett



IN PITTSBURGH, the first multi-storied office building to be completely sheathed in colored anodized aluminum sheets is under construction — a new state office building in the Golden Triangle. Architects: Altenhof & Bown



NATO'S PERMANENT HEADQUARTERS in Paris (model photo at left) will be built on a site provided by the French government at Place de la Porte Dauphine. The French government also selected the architect, Jacques Carlu, Inspector General of Civil Monuments in France. The plans, approved by Paris authorities, provide some 900 offices in addition to NATO's main Council Chamber, a number of smaller committee rooms, restaurants, press facilities and library

(More news on page 15)

NEVER Ventilate a Ceiling or Wall Space to the Inside...

If you do, the better the insulation, the worse will be the condensation; for the colder the air in the space between insulation and roof or walls, the less vapor can it support in suspension.

In new construction, moisture is evaporating from many tons of cement and plaster. Vapor flows from areas of greater density into this small, cold space, an area of less vapor density and small vapor capacity.

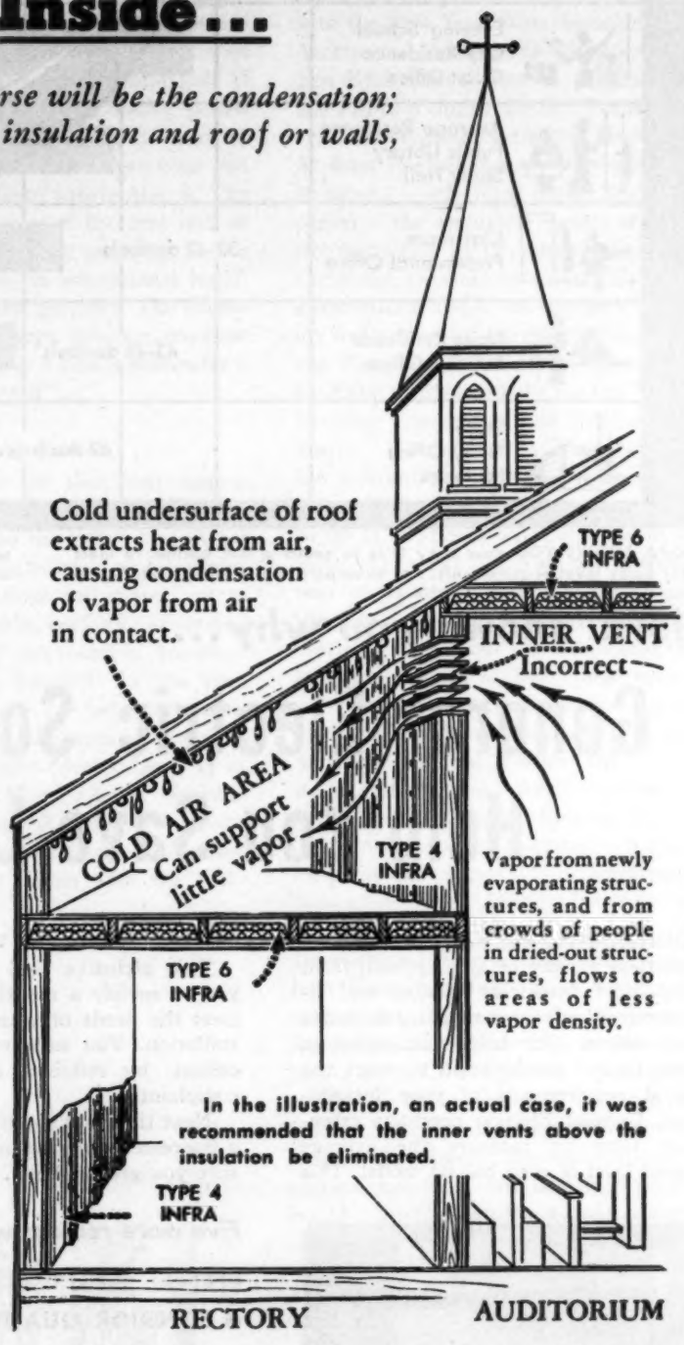
Where multiple accordion aluminum is used, fortuitous vapor and water (for instance rain) will gradually flow out, as vapor, through exterior walls and roofs as vapor pressure develops within. The vapor cannot back up through the continuous, almost impervious aluminum. It will flow out because walls and roofs have substantial permeability by comparison, far greater than the required 5 to 1 ratio. Infiltration under the flat stapled flanges of multiple accordion aluminum is slight.

Unusual amounts of vapor, as from crowds in theatres, churches, schools, stores, etc. must be adequately vented to the outside. Each person breathes out and perspires vapor, winter and summer, at the rate of 3 lbs. a day.

To obtain MAXIMUM, **uniform-depth** protection against heat loss and condensation formation, it is necessary to use the new **edge-to-edge** multiple aluminum*, **each** sheet of which stretches from joist to joist.

The U.S. National Bureau of Standards has prepared a helpful and informative booklet, "Moisture Condensation in Building Walls" which discusses causes and cures. Use the coupon and we will send a free copy.

*Patent applied for



COST OF EDGE-TO-EDGE INFRA Multiple Aluminum Insulation installed in new construction between wood joists, material and labor

Type 6-PS about 10¢ sq. ft.
Type 4-PS about 8¢ sq. ft.

INFRA INSULATION, INC., 525 Bway., New York, N. Y.

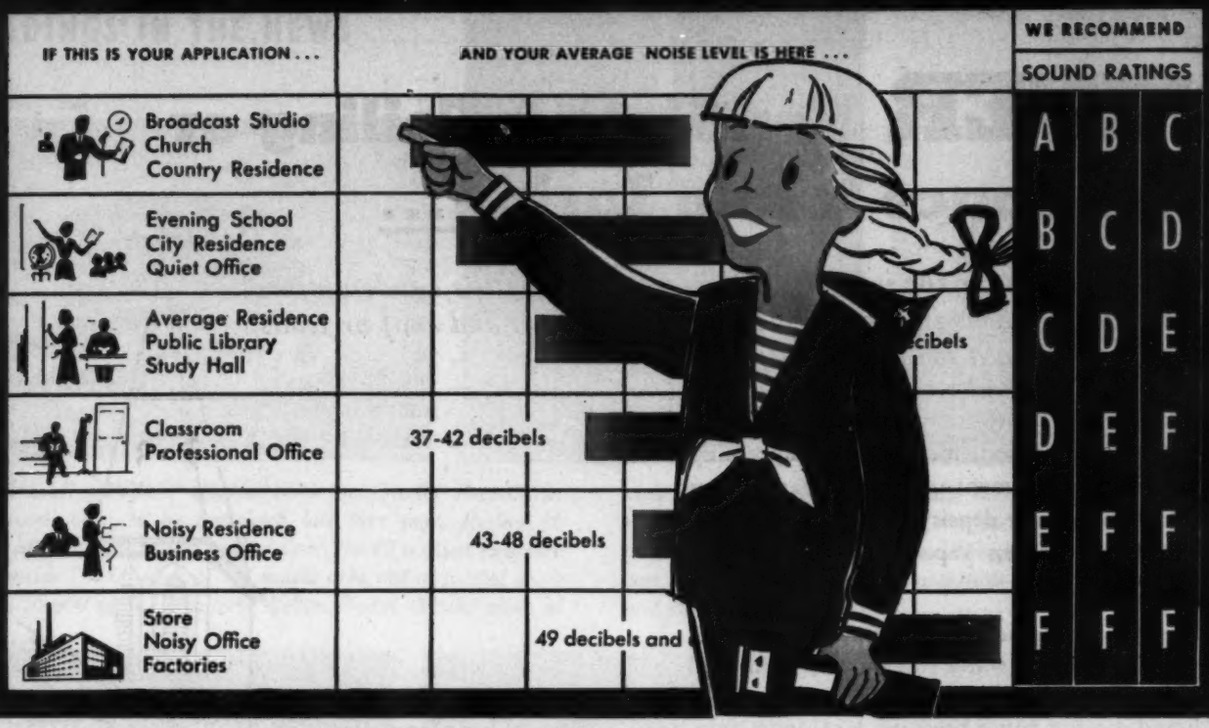
INFRA INSULATION INC.
525 Broadway, N.Y.C., Dept. R9

☐ Please send FREE U.S. Bureau of Standards Booklet BMS63 ☐ Please send samples

Name_____

Firm_____

Address_____



FLORA SHOWS YOU how easy it is to select a G-E ballast to meet your noise level requirements. For example: in a library installation where noise levels must be extremely low, or in a quiet office where ballast noise could interfere with work, G.E. has a ballast to do the job.

Flora shows you why...*

General Electric Sound-rated Ballasts Help You Save Lighting Dollars

Fluorescent lighting today is used in a countless variety of applications; from ultra-quiet broadcast studios and library reading rooms to noisy factories and offices. To help you select a lamp-ballast combination to meet the sound requirements of your installation, General Electric conducts extensive tests to measure the average sound level of each ballast model. This measurement is called "Sound Rating."

This exclusive G-E feature enables you to specify a model sound-rated to meet the needs of your fluorescent installation. You save valuable lighting dollars by reducing expensive noise complaints.

Next time you specify equipment for a fluorescent lighting installation, make sure you get the best . . . specify General Electric sound-rated ballasts. Look for the sound rating on the nameplate. A G-E ballast tag or sticker on your fixture is proof that it's equipped with the best in ballasts. It's the easy way to be certain. For further information on G-E ballasts, write Section 401-8, General Electric Company, Schenectady 5, New York.

*Miss Fluorescent Ballast, G.E.'s Ballast Mascot.

Copyright 1955, General Electric Company.



G-E BALLASTS operate more quietly than average ballasts, and G-E engineers are constantly testing new materials and methods in order to better control ballast noise.

Five more reasons why

GENERAL ELECTRIC IS YOUR BEST BALLAST VALUE

- **SUPERIOR QUALITY CONTROL**
- **LONGER BALLAST LIFE**
- **PRECISE LAMP-MATCHED DESIGN**
- **PROVED PRODUCT LEADERSHIP**
- **COMPLETE CUSTOMER SERVICES**



Progress Is Our Most Important Product

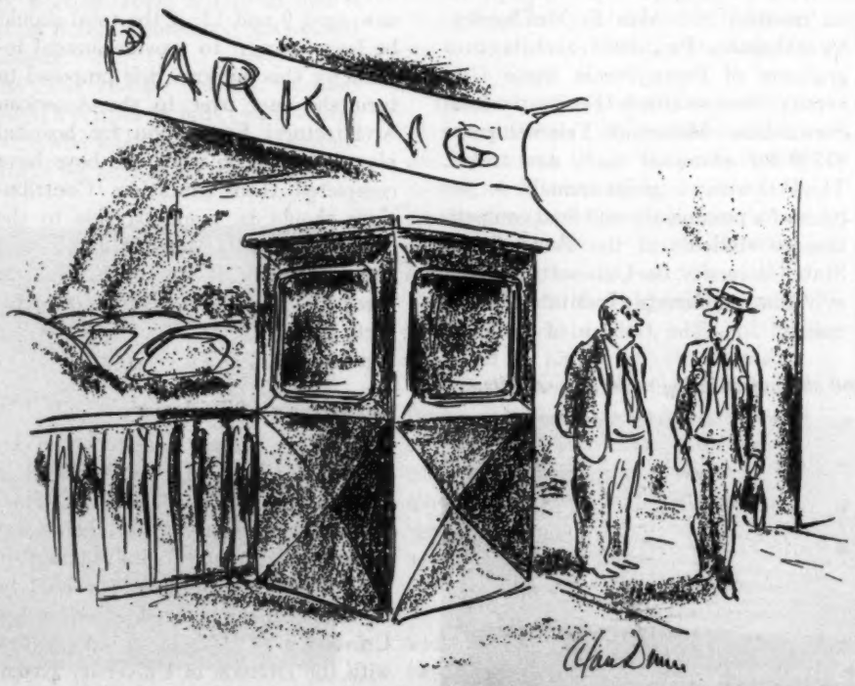
GENERAL ELECTRIC

The State of Construction

The trend was still up, as F. W. Dodge Corporation released its latest figures on construction contract awards. Both the month and the year to date were reflecting unprecedented activity; in fact, the first seven months of 1955 reached a total dollar volume nearly matching the figure for the first *nine* months of 1954, itself a record period. For details, see page 302. . . . One of the most striking characteristics of the record 1955 construction level, noted Dodge economist Dr. George Cline Smith, is the broad base of the increased activity, including nearly all classes of residential and nonresidential building and engineering. In his review of construction contract awards in the 37 eastern states during the first half of 1955, as compiled from Dodge Reports, Dr. Smith said he could find "no indication of a downturn underway" and, in fact, that "there is nothing in the figures to date to indicate that any slackening of the rate of increase has developed as of mid-1955." Dr. Smith listed these as the most significant features of the first half: "1. There has been a very sharp reversal of the downtrend in industrial construction which followed the Korean war, far beyond the expectations of government and private forecasters. The upturn has been very broadly based, affecting nearly all major categories of manufacturing. 2. Contracts for new residential construction have continued to show large increases over the preceding year, with practically all of the emphasis on single-family homes. Apartment construction accounted for a smaller proportion of residential building in the first half of 1955 than in any corresponding period on record. 3. Every major category of construction showed increases over last year, most of them substantial. 4. The smallest increase over the first half of last year in any major category, rather surprisingly, was in educational buildings, up only four per cent. The educational total was huge, however, amounting to slightly over a billion dollars for a new all-time record."

The Quickening Season

In addition to the mist and mellow fruitfulness of which the poet sings, autumn brings also the year's longest list of meetings, conferences, conventions, exhibits, expositions and shows, not to mention luncheons, cocktail parties and that frequently unavoidable American institution the banquet. In the next three months alone, there are seven A.I.A. regional conferences scheduled — Northwest District (September 9–11 at Many Glaciers Hotel, Glacier National Park); Gulf States (October 6–8, Roosevelt Hotel, New Orleans); California-Nevada-Hawaii (along with the California Council of Architects, October 6–8, Biltmore Hotel, Santa Barbara); Central States (October 12–15, Hotel Jefferson, St. Louis); New York (along with the New York State Association of Architects, October 13–15, Sheraton-Ten Eyck Hotel, Albany); North Central States (October 14–15); Texas (November 2–4, Hotel Shamrock, Houston). At least one other state convention of architects is scheduled during the same period — the Architects Society of Ohio, October 19–21 at the Charter Hotel in Cleveland. Or architects who want both a convention and a *real* trip may be going to Caracas for the Ninth Panamerican Congress of Architects, September 12–22 or to Mexico City for the "First Mexican Congress of the Building Industry," November 7–11. Then there are the conventions of the American Society of Planning Officials — September 25–29 at the Sheraton-Mount Royal in Montreal — and the National Association of Housing and Redevelopment Officials — October 16–20 at the Hotel Statler in Cleveland. The-world-we-live-in is reflected in at least three major national events that focus on the "peaceful atom" — the annual meeting of the Atomic Industrial Forum and "first trade fair of the atomic industry," September 26–30 in Washington, D. C.: "The A-Bomb and Industry — a Prescription for Survival," a conference November 17 at Illinois Institute of Technology; the Nuclear Congress and International Atomic Exposition being held December 10 to 16 in Cleveland under the auspices of the Engineers Joint Council. Solar energy is the subject of a "world symposium" to be held in Phoenix November 2–5; and, not to ignore that currently magic word automation, the "second international automation exposition" will be held November 14–17 in Chicago. For a *real* roundup of coming events, see pages 368–374.



— *Drawn for the* RECORD *by Alan Dunn*

"There were a few scraps left over from the Alcoa Building."

Education Notes

The Southern Regional Education Board has published **"Architects for the South,"** the report of its Study Commission on Architectural Education in the South, intended to provide a basis for deciding whether the Southern region needs to establish additional schools of architecture in the foreseeable future. The Commission, which was headed by Dean William T. Arnett of the College of Architecture and Allied Arts, University of Florida, does not recommend

(Continued on page 16)

MEETINGS AND MISCELLANY

(Continued from page 15)

the establishment of additional schools at this time, does recommend to the schools and the profession study of "the need and opportunities" in such fields as graduate education in architecture; architectural research on the relations of building elements and human occupancy, involving the social sciences as well as architecture and engineering; screening methods for granting admission to architectural schools; and the role of nonprofessional training in producing architectural personnel. . . . **Appointments** — Louis B. Wetmore has been named head of the Department of City Planning and Landscape Architecture and Director of the Bureau of Community Planning at the University of Illinois. Mr. Wetmore succeeds Prof. Karl B. Lohmann, retiring September 1 after 34 years on the university staff. . . . Bruno Funaro, assistant professor of architecture at Columbia University, has been made assistant dean of the university's School of Architecture, Dean Leopold Arnaud announces. . . . The appointment of Hamilton Gray, professor of civil engineering at the University of Maine, to the chairmanship of the Department of Civil Engineering at Ohio State University will be effective October 1. . . . **New Courses** — "Business and Management for the Building Industry" is the title of a new curriculum offered by the Iowa State College Department of Industrial Administration in coöperation with the Department of Architecture and Architectural Engineering. It is intended for students interested in business as related to the building industry and having as their goals either private business enterprise or business management positions, will lead to a Bachelor of Science degree, with a major in industrial administration, minor in architecture. . . . The University of Southern California inaugurates with this academic year a new graduate curriculum leading to the degree of Master of Science in City and Regional Planning. The new degree, which will require a minimum of one year of graduate study, will be awarded jointly by the School of Architecture and the School of Public Administration. . . . **Scholarships** — Applications will be accepted till November 15 for the 1956 Arnold W. Brunner Scholarship administered by the New York Chapter of the American Institute of Architects. The grant is for an amount up to $2400. Address the New York Chapter, A.I.A., 115 East 40th Street, New York 16, New York. . . . Architects under 35 years of age may enter the general competition for Fulbright scholarships for study abroad during 1956–57 by applying before October 31 to the Institute of International Education, 1 East 67th Street, New York City. The scholarships cover transportation, tuition, books and maintenance for one academic year in Austria, Belgium, and Luxembourg, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway or the United Kingdom. . . . **Awards** — The University of Illinois has announced award of the Francis J. Plym Fellowships for this year — in architecture, to Jim K. Maeda of Chicago, a 1954 Illinois graduate, with Thomas W. Claridge, Rockford, Ill., as alternate; in architectural engineering, to Donald E. Thompson, Tiskilwa, Ill., a 1953 Illinois graduate, with Manfred H. Riedel, Lake Bluff, Ill., as alternate. The Fellowships provide $1700 each for travel and study in Europe for six months. . . . Alan E. McChesney, Swarthmore, Pa., 1955 architecture graduate of Pennsylvania State University, was awarded this year's John Stewardson Memorial Fellowship of $1500 for advanced study and travel. The Fellowship is given annually on the basis of a preliminary and final competition to students of the Pennsylvania State University, the University of Pennsylvania and Carnegie Institute of Technology. . . . The College of Architecture and Design of the University of Michigan has announced Phillip John Luth of Cambridge, Mass., as winner of the George G. Booth Traveling Fellowship Competition for 1955.

Producers on Parade

A September 6 opening in Chicago was scheduled for the Caravan of Quality Building Materials and Modular Application, the second annual edition of the traveling exhibit of building materials and equipment sponsored by the Producers' Council, Inc. The exhibit, containing displays of the products of 43 manufacturers and associations, includes several showing applications of materials dimensioned by the modular system. Over the next seven months, the caravan will travel to 36 cities in a specially-designed van built of aluminum and stainless steel. The van, which will carry the 45 exhibit booths uncrated, was built with a padded framing to protect the equipment, but, just in case, a "display and exhibit mechanic" will accompany the exhibit to repair any damages. The booths themselves are of a standard size and design; displays were designed by the exhibitors.

A Memorial Fund for Shaffer

Friends of the late Marshal Shaffer, chief of the Technical Services Branch, Division of Hospital Facilities, U. S. Public Health Service, have initiated efforts to set up a Marshall Shaffer Memorial Fund. The hope is that the fund will be large enough to finance the education of Mr. Shaffer's two sons, now aged 9 and 12; if the total should be large enough to provide annual income for this purpose, it is proposed to turn the sum over to the American Architectural Foundation for hospital planning research when the boys have completed their education. Contributions should be made payable to the "Marshall Shaffer Memorial Fund" and sent to Edmund R. Purves, F.A.I.A., in care of The American Institute of Architects, 1735 New York Ave., N.W., Washington 6, D. C.

Van will carry Producers' Council annual road show of building materials exhibits



Esthetics and Technics

The Fourth Annual Conference for Architects, to be held October 18–19 in Urbana, Ill., has as its subject "Integration of Contemporary Esthetics and Building Techniques." Information on the conference, which is sponsored by the Department of Architecture at the University of Illinois in coöperation with the Division of University Extension, is available from the chairman, Robert J. Smith, professor of architecture.

ARCHITECT'S RESPONSIBILITY IN BUILDING INDUSTRY THEME FOR 1955 BRITISH ARCHITECTS' CONFERENCE

Eric Bird, editor of the Journal *of the Royal Institute of British Architects, reports on the 1955 British Architects' Conference at Harrogate, Yorkshire. While the Conference is the closest British equivalent to the A.I.A. convention, it is quite different in character for the simple reason that (thanks at least in part to English geography) business matters are dealt with at other times. The Conference itself becomes a true seminar for the profession, with only a pleasant program of social events and tours to interrupt the serious papers and discussions.*

The topic of this year's discussion by the R.I.B.A. was "The Organization of the Building Industry: the Architect's Responsibility." It was primarily an attempt to survey the whole field of contractual, office and job organization, but there was a pronounced emphasis on the idea of "one industry" in which the architects represent the design side. A few people had feared that public discussion of such a subject might be bad public relations, especially if one or two of the wilder men probed the inevitable sore spots too hard.

But nothing of the kind occurred; the discussion turned out to be a high level "shop" talk which the daily newspaper men found dull because it was over their heads. The architects, on the other hand, were intensely interested and it looks as if this Conference has started something.

The chief speaker was Sir Thomas Bennett, a private architect with a large practice who was the war-time Director of Works for high speed construction of munitions plants, airfields and camps and who galvanized the Ministry of Works into an activity and efficiency incredible to those who know government departments. He has clear-cut ideas which he expresses in fluent prose without the aid of a single note. After a brief survey of changes in the whole field of building during the last half century, he proceeded to diagnose one by one the weaknesses of the industry and to propose constructive remedies. He touched on the crafts, sub-contracting, the levels of technical knowledge, quality and cheapness, wages, materials ordering, research and education of architects, builders and craftsmen — altogether a statesmanlike performance.



Sir Thomas addressing the Conference

He was followed by David Woodbine Parish, director of a large firm of builders and an authority on management, building education and efficiency methods. He it was who argued the notion of "one industry" providing a public service of building for the nation. At bottom, he said, all industrial problems are a matter of human relations. What sort of response, he asked, could be expected from the operative who could be hired and fired by the hour? If we were to give better service we must realize that the other fellow in the building team mattered to us. Of management he said that although there was universal agreement that the industry needed better management, little attempt had yet been made to examine in detail and to analyse its complex field.

The third official speaker was Alwyn Sheppard Fidler, City Architect of Birmingham and a Rome Scholar in Architecture. A salaried official architect, he spoke as the controller of a large program of municipal building — mainly housing, schools, police buildings and fire stations — amounting to about 15 million pounds worth of work in hand, much of this delegated by him to private architects. The fourth speaker was George Grenfell Baines, a brilliant young private practitioner and the leader of a group practice engaged on industrial buildings and schools. These two spoke from their special viewpoints but with marked agreement in principle.

These four carefully chosen speakers set the keynote of the discussion which was sustained very well during the next two days, though rather diffusely. It

(Continued on page 386)



The Mayor of Harrogate welcoming the Conference. Left to right: the Mayor; R.I.B.A. president Charles Aslin; R.I.B.A. secretary "Bill" Spragg; Sir Thomas Bennett, principal Conference speaker; David Woodbine Parish



John S. Gifford, A.I.A., of Pennsylvania, with James Cubitt, Fello Atkinson and William Tillyard at the Civic Reception



At the opening informal reception — Graham Henderson, R.I.B.A. past president, with Mr. Spragg, Mrs. Henderson and Mrs. Fidler, Mr. Spragg's sister



At the visit to Harewood House. Hubert Bennett, West Yorkshire Society of Architects' president, with Mrs. Bennett and their daughter Helen

(More news on

G INDUSTRY CONFERENCE

rfields and camps
the Ministry of
y and efficiency in-
know government
as clear-cut ideas
fluent prose with-
note. After a brief
the whole field of
st half century, he
se one by one the
dustry and to pro-
nedies. He touched
tracting, the levels
dge, quality and
naterials ordering,
tion of architects,
nen — altogether a
nance.

y David Woodbine
rge firm of builders
anagement, build-
fficiency methods.
the notion of "one
a public service of
on. At bottom, he
blems are a matter
What sort of re-
d be expected from
ould be hired and
ve were to give bet-
alize that the other
team mattered to
said that although
greement that the
r management, lit-
een made to exam-
nalyse its complex

peaker was Alwyn
y Architect of Bir-
e Scholar in Archi-
fficial architect, he
r of a large program
— mainly housing,
gs and fire stations
t 15 million pounds
and, much of this
private architects.
as George Grenfell
ung private practi-
of a group practice
rial buildings and
spoke from their
but with marked
le.

ly chosen speakers
e discussion which
well during the next
rather diffusely. It

(Continued on page 386)



The Mayor of Harrogate welcoming the Conference. Left to right: the Mayor; R.I.B.A. president Charles Aslin; R.I.B.A. secretary "Bill" Spragg; Sir Thomas Bennett, principal Conference speaker; David Woodbine Parish



John S. Gifford, A.I.A., of Pennsylvania, with James Cubitt, Fello Atkinson and William Tillyard at the Civic Reception



At the opening informal reception — Graham Henderson, R.I.B.A. past president, with Mr. Spragg, Mrs. Henderson and Mrs. Fidler, Mr. Spragg's sister



At the visit to Harewood House. Hubert Bennett, West Yorkshire Society of Architects' president, with Mrs. Bennett and their daughter Helen

(More news on page 24)









Tops
in
convenience

Tops
in
beauty

38
sizes

FOR **ANDERSEN**
PRESSURE SEAL
UNITS AND MANY
OTHER MODULAR
DOUBLE HUNG OPENINGS

OPEN THIS SIDE FIRST

page 24)

Here's what Andersen Com

1

Beauty

The attractive narrow lines of this sturdy wood unit make the new Andersen Self-Storing Combination Window the most smartly designed, the best looking combination you've ever seen. No longer need storms or screens detract from the appearance of homes. The Andersen Combination brings its own special window beauty and can be painted, if desired, to match house trim for perfect blending with any decoration or design.



ombination



complete

2

No struggle. No strain. No fighting
with storms or screens at spring a
fall change-over time. Lower storm
panel on the new Andersen Self-S
Combination Window slides easily
effortlessly to top of the unit for s
during summer months. Can quic
done from inside in a matter of se

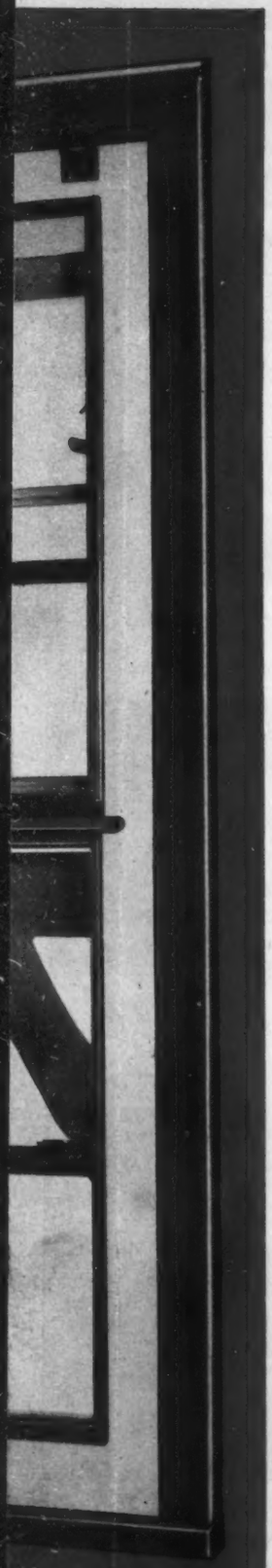


Screen panel easily removable. For winter storage screen panel can be left in place or can be stored in upper half of unit.

Full
easil
And
Com
der
for

Combination has to build

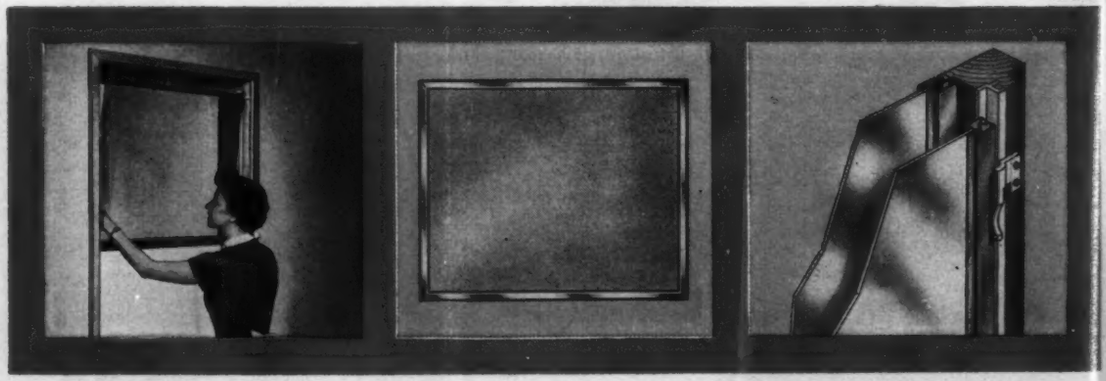
complete self-storing



2

No struggle. No strain. No fighting with storms or screens at spring and fall change-over time. Lower storm panel on the new Andersen Self-Storing Combination Window slides easily and effortlessly to top of the unit for storage during summer months. Can quickly be done from inside in a matter of seconds.





Screen panel easily removable. For winter storage screen panel can be left in place or can be stored in upper half of unit.

Full length screens are easily obtained with the Andersen Self-Storing Combination. Simply order an extra screen panel for the unit.

Triple glazing is possible when desired. All you do is order two extra upper storm panels and slip them into place on the unit.

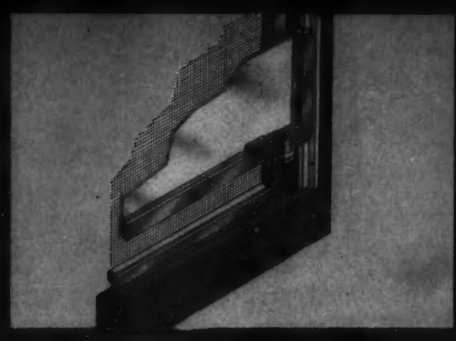
d new

g

Big
improve
in Pres
Sea



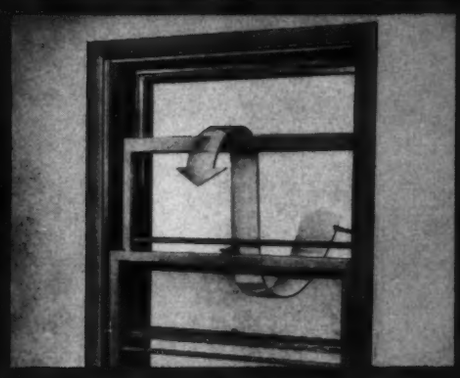
Cleaning and painting is a cinch. The entire window unit swings out for easy sill cleaning. Or you can lift unit off entirely for painting.



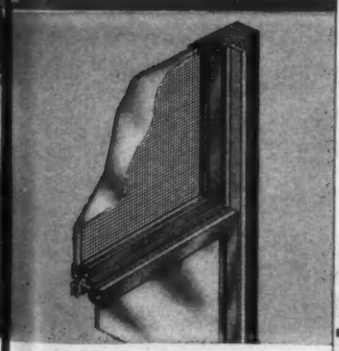
Plastic guides for bottom storm panel assure smooth and easy operation. No galling metal-to-metal contact. Panel slides at a touch.



Get winter ventilation whenever desired. Lower storm panel on the Andersen Combination can be locked in your choice of five open positions.



Rainy weather ventilation is possible in summer time . . . and with no fear of water damage to furniture, floors or draperies.



Sturdy 1½" treated frame with aluminum center bar. Nylon strikes for screen and top storm panel installed. Plastic guide for bottom storm panel installed. Hangers and locks for applying to frame.

ation

tion

TION
A



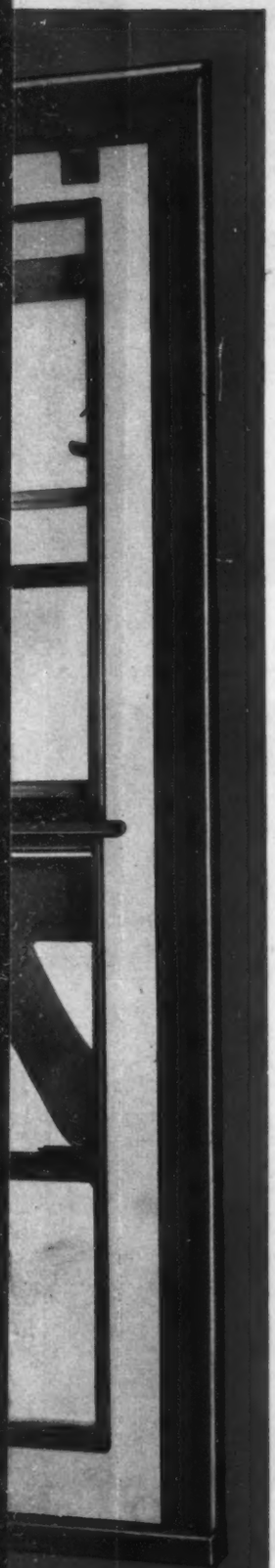
All panels removable. Thanks to the easy sash removability of Pressure Seals, all screens and storm panels can be taken out, cleaned and stored any place homeowner wishes.

dowalls

TRADEMARK OF ANDERSEN CORPORATION

Combination has to build

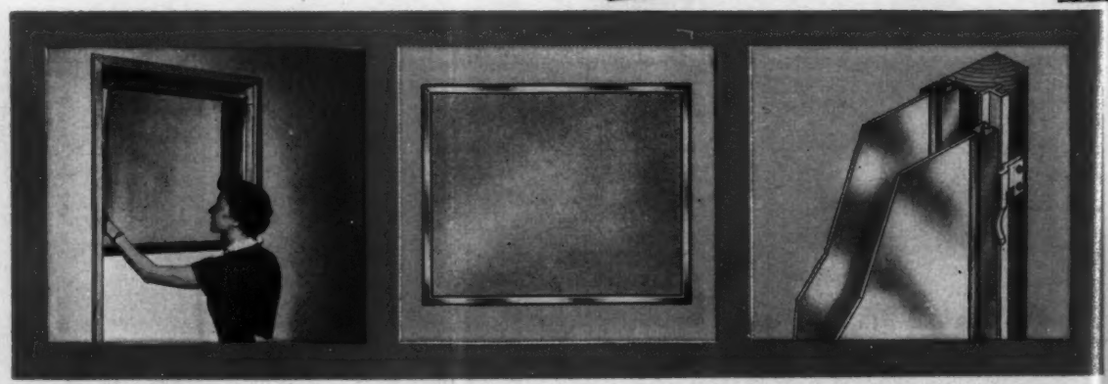
complete self-storing



2

No struggle. No strain. No fighting with storms or screens at spring and fall change-over time. Lower storm panel on the new Andersen Self-Storing Combination Window slides easily and effortlessly to top of the unit for storage during summer months. Can quickly be done from inside in a matter of seconds.





Screen panel easily removable. For winter storage screen panel can be left in place or can be stored in upper half of unit.

Full length screens are easily obtained with the Andersen Self-Storing Combination. Simply order an extra screen panel for the unit.

Triple glazing is possible when desired. All you do is order two extra upper storm panels and slip them into place on the unit.

d new client appeal

g

Big improvement in Pressure Seals

3



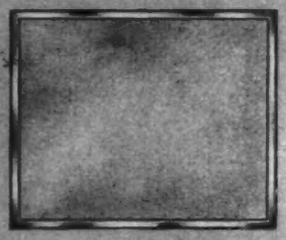
Fits Pressure Seals exactly! The new combination window is made to go with Andersen Pressure Seals. They team up to offer the best looking, most weathertight, most convenient double hung unit on the market.



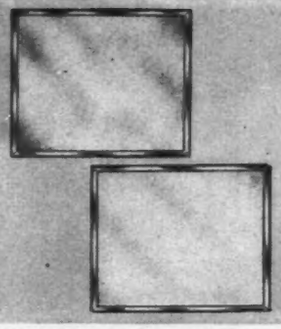
Easy sash removability of all Andersen Pressure Seal Units makes the new Self-Storing Unit a doubly easy-to-use combination window. All panels can be removed, all cleaning can be done from inside the home.



Sturdy 1½" treated frame with aluminum center bar. Nylon strikes for screen and top storm panel installed. Plastic guide for bottom storm panel installed. Hangers and locks for applying to frame.



One screen panel. Panel has all-weather aluminum frame. Fasteners already applied at factory. Panels are wired with rugged Alclad aluminum screen cloth. Will withstand year 'round exposure.



Two storm panels. Each panel made of quality window glass set in narrow aluminum frame. Designed to be good looking, strong, yet light in weight to assure ease of handling whenever necessary.

HEIGHT ↓ / WIDTH →	1'-8"	2'-0"	2'-4"	2'-8"	3'-0"	3'-4"
3'-2"		x	x	x	x	x
3'-6"		o	o	o	o	o
3'-10"		x	x	x	x	x
4'-2"	x	x	x	x	x	x
4'-6"	x	x	x	x	x	x
4'-10"		o	o	o	o	o
5'-2"	x	x	x	x	x	x

There's a wide selection of sizes offered by the Andersen Self-Storing Combination Window. Just look over the size table. You'll find 28 sizes (*marked x*) designed to fit perfectly with Andersen Pressure Seal Units. What's more, you'll find 10 extra sizes (*marked o*) have been added to the line to make it adaptable to most modular stock size windows.

Andersen





No complicated installation problems. The Andersen Combination Window hangs just like any standard storm window or screen.

Cleaning and painting cinch. The entire window swings out for easy sill cle ing. Or you can lift unit entirely for painting.



removability of all Pressure Seal Units ew Self-Storing Unit sy-to-use combina- w. All panels can be ll cleaning can be nside the home.



4

Get winter ventilation wh ever desired. Lower sto panel on the Andersen Com nation can be locked in y choice of five open positio

H	1'-8"	2'-0"	2'-4"	2'-8"	3'-0"	3'-4"
-2"		x	x	x	x	x
-6"		o	o	o	o	o
-10"		x	x	x	x	x
-2"	x	x	x	x	x	x
-6"	x	x	x	x	x	x
-10"		o	o	o	o	o
-2"	x	x	x	x	x	x

vide selection of sizes offered lersen Self-Storing Combina- ow. Just look over the size 'll find 28 sizes (*marked x*) o fit perfectly with Andersen eal Units. What's more, you'll ra sizes (*marked o*) have been he line to make it adaptable odular stock size windows.

easy installation easy operation

ANDERSEN CORPORATION
BAYPORT • MINNESOTA

sen *Windo*



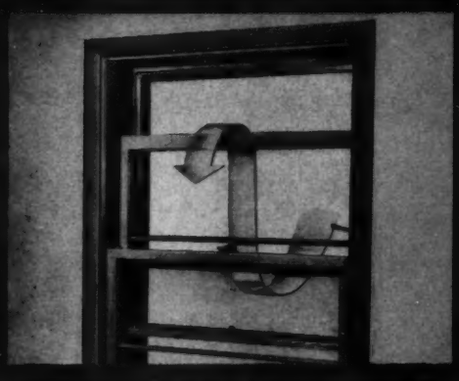
ainting is a window unit asy sill clean- lift unit off ting.



Plastic guides for bottom storm panel assure smooth and easy operation. No galling metal-to-metal contact. Panel slides at a touch.



lation when- ower storm ersen Combi- cked in your en positions.



Rainy weather ventilation is possible in summer time . . . and with no fear of water damage to furniture, floors or draperies.

on

n



All panels removable. Thanks to the easy sash removability of Pressure Seals, all screens and storm panels can be taken out, cleaned and stored any place homeowner wishes.

walls

TRADEMARK OF ANDERSEN CORPORATION


N
An
se
co
HO

NEW

ndersen

self-storing
ombination
window

PACKED WITH
HOME BUYER APPEAL

THE U. S

Archite



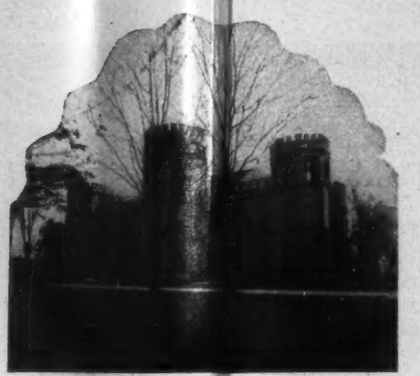
Prompted by the co
proposed design for t
emy near Colorado
oft-expressed wish f
that would measure
United States Milit
RECORD turned back
menting on the 1903
expansion of West P
in which Montgom
magazine's leading
reviewed the winnin
Goodhue and Fergu
sions: in December 1
tion had been annou
ary of 1911, when co
ished buildings forme
review of the firm's

Schuyler found hi
well pleased with the
ing in the 1903 article
ager up or along the
a sensitive constituti
feel, as he glides or w
ward, from the first
by the hotel, past
closed by the higher a
and so past Trophy
work is of a piece, tha
ate architectural expre
States Military Acad
tion of a hundred y
gives the sense of an
and not of an exotic
But at the same tim
"If he be of a reflect
sensitive turn, it ma
inquire why the arc
which these results ha
not capable of a ver
why it might not be d
much more vernacul
vital expression of A
twentieth century tha
in the 'modern Lati
tural language, which

(Co

THE U. S. MILITARY ACADEMY: "A CISATLANTIC MONT ST. MICHEL"

Architectural Record, December 1903

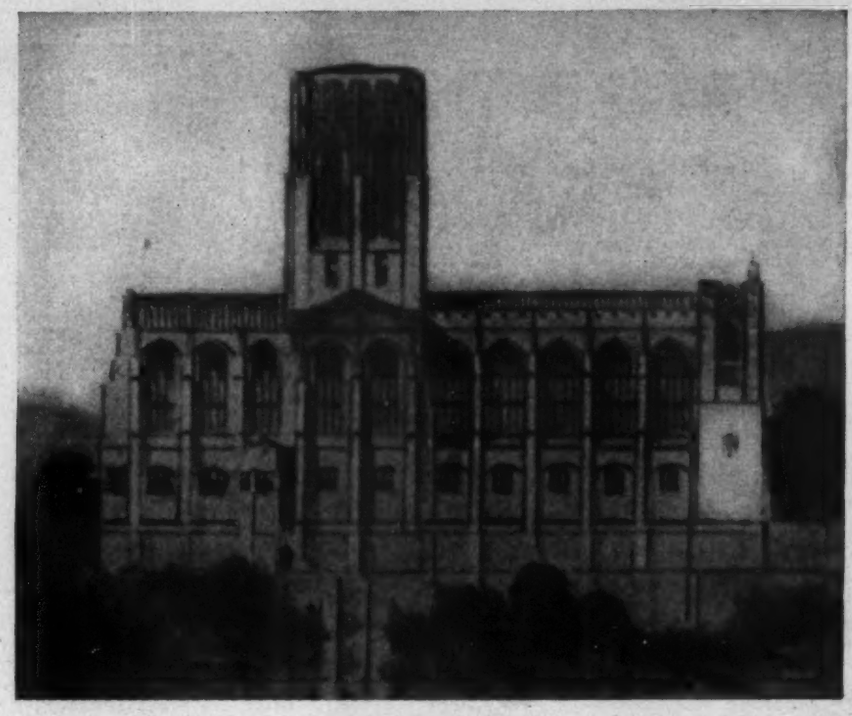


Prompted by the controversy over the proposed design for the Air Force Academy near Colorado Springs and by the oft-expressed wish for an architecture that would measure up to that of the United States Military Academy, the RECORD turned back to its pages commenting on the 1903 competition for the expansion of West Point for the articles in which Montgomery Schuyler, the magazine's leading critic at the time, reviewed the winning design of Cram, Goodhue and Ferguson on two occasions: in December 1903 after the selection had been announced, and in January of 1911, when comments on the finished buildings formed a major part of a review of the firm's work.

Schuyler found himself, on the whole, well pleased with the design, commenting in the 1903 article: "The future voyager up or along the Hudson, if he be of a sensitive constitution, will not fail to feel, as he glides or whirls to the northward, from the first vista that is closed by the hotel, past the second that is closed by the higher and remoter chapel, and so past Trophy Point, that all this work is of a piece, that it is the appropriate architectural expression of the United States Military Academy, with its tradition of a hundred years, and that it gives the sense of an indigenous growth and not of an exotic transplantation." But at the same time, Schuyler added, "If he be of a reflective as well as of a sensitive turn, it may occur to him to inquire why the architectural style in which these results have been attained is not capable of a very wide extension, why it might not be developed into some much more vernacular and vivid and vital expression of American life in the twentieth century than can be attained in the 'modern Latin' of an architectural language, which has the advantage

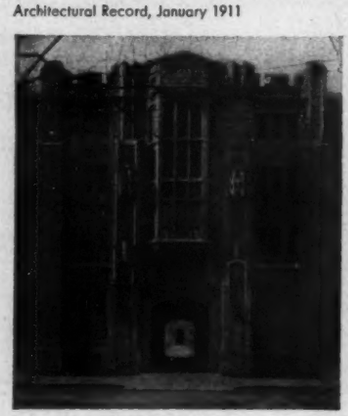
(Continued on page 394)

Architectural Record, December 1903



Above: Cram, Goodhue and Ferguson's rendering of the accepted chapel design, which Schuyler said would be "recognized as one of the most notable achievements of 'early twentieth century' Churchbuilding in America, or for that matter in Europe"

Architectural Record, January 1911





Schuyler found the face of the cadet barracks (above, left) suitable, but thought the yellow-brick back lamentable, and commended the heraldic display of States' shields ("wretchedly unheraldic material") on the post headquarters building (above, right). Below: the architects' 1903 "bird's-eye view" rendering of the campus

Architectural Record, January 1911



Keep costs *down*... quality *up!*

WITH 700 SERIES SLIDING DOOR HARDWARE

This new series of sliding door hardware is excellent for any type of installation because of its universal design and low cost. It will carry doors up to 100 pounds each, including floor to ceiling doors from ¾" to 1¾" thick. The aluminum track is easily attached to any standard head jamb. Doors can be hung after hangers are attached but will not jump track. Adjustable hangers with one inch nylon rollers and oil impregnated bearings. Complete packaged sets available.

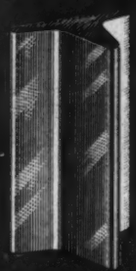
See our catalog in Sweet's Architectural or Light Construction Files or write

STERLING HARDWARE MANUFACTURING CO.
2345 WEST NELSON STREET • CHICAGO 18, ILLINOIS

Sterling
HARDWARE



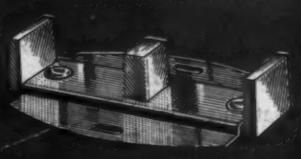
NEW! 700 SERIES
Track and Hangers
for By-Passing Doors



NEW!
Sliding Door Pulls
For wardrobes and cabinets. Surface mounted—no mortising. No. 863, 1½" long. No. 865, 2½" long. No. 867, 3½" long. Anodized aluminum. All popular finishes.



No. 1058 Sliding Door Lock
For by-passing closet doors. Easy to install—bore one hole. All popular finishes. For ¾" to 1⅜" thick doors.



NEW!
Nylon and Steel Floor Guide
For by-passing doors. Keeps doors evenly. Easily installed with two screws. No. 906 for ¾" doors. No. 907 for 1¼" doors. No. 908 for 1¾" doors.

a **WASHINGTON** *report by Ernest Mickel*

SLAB-ON-GROUND CONSTRUCTION:

BRAB STUDY FOR FHA SUGGESTS SOME BASIC STANDARDS

The Building Research Advisory Board aimed at two targets in preparing its comprehensive report on slab-on-ground construction in houses for the Federal Housing Administration. The first, a general objective, was to make possible a comfortable and durable slab-on-ground construction at the lowest cost consistent with sound engineering practice. Second, and a more specific objective, was to provide the FHA with advisory information useful in making changes in its Minimum Property Requirements, and to define research needed to solve currently unsolved problems.

FHA Revises MPR's

Thus BRAB outlined its purposes in the report recently submitted to FHA. FHA has since revised its MPR's, using the BRAB findings as basis for the changes.

This report was said to be the first document on record that related recommended flooring types to specified types of slab-on-ground construction. This was done for both heated and unheated slabs.

BRAB limited its findings to slabs placed on the ground, on a fill or base material, and to slabs above the level of finish grades adjacent to the structure, for basementless houses. Slabs located partly or wholly below grade, as in split-levels, were considered a subject for special study. Nor were lightweight aggregate slabs included. And slab construction techniques for special soil conditions were avoided.

Insulation Data Included

Insulation requirements were covered thoroughly. A table defines recommended minimum insulation requirements for concrete floor slabs, in relation to outside design temperatures and insulation conductivity, for indirectly-heated, panel-heated and warm-air perimeter types. The data is given in inches of thickness.

Moisture and vapor conditions are covered in detail with considerable attention to barriers and separators.

Reinforcing Recommendations

On the question of reinforcement, BRAB reported its advisory committee members differed on two recommendations, both dealing with heated slabs. The report states, however, that distributed steel reinforcement should be required:

1. In all slabs supporting load-bearing partitions or partitions of substantial weight, if such partitions are placed more than four ft from the center axes of the slab.
2. In all slabs where (a) slab is placed on fill more than two ft deep or (b) more than 10 per cent of the area within the foundation wall has been excavated and backfilled.
3. In all slabs in which heated ducts or pipes are imbedded.
4. In all unheated slabs longer than 30 ft in their longest dimension.

Surface drainage and elevation of slab above finished grade are important considerations to avoid excessive moisture, the report said. Many moisture problems will not occur if these two factors are properly handled. A slab-on-ground with a moisture condition may cause a failure of the flooring surface material and thermal problems are increased. It was strongly recommended that land having a liquid water or hydrostatic pressure condition near the ground surface should not be used as a site for any house incorporating slab-on-ground construction.

For structural reasons it is considered important to provide a uniform heating surface for the slab, BRAB noted. An unreinforced slab must have a bed that will not expand or contract if cracking is to be prevented. Proper contraction of the soil will generally prevent serious cracking. Use of the right combination of aggregates, cement and water for the mix is necessary for good workability, finishing characteristics and the resulting strength of the slab. Special structural conditions such as a continuous bearing partition on the slab, or a heavy concentrated load, must be designed in accordance with good engineering practice. Also, the report added, soils with special movement characteristics necessitate special slab design.

More Research Wanted

The BRAB committeemen found several areas in which they said there presently is incomplete knowledge and the report called for additional research on these points:

1. Development of a simple and accurate soil capillarity test suitable for use on the building site.
2. Development of data which determines the nature of moisture movement in the slab bed and through the slab.
3. Development of a test method for readily determining the amount of moisture present in a concrete slab in place.
4. Development of data for determining the amount of vapor permeance through a completed slab-on-ground construction. Not enough is known of vapor permeance of a concrete slab, nor to what extent the slab may serve as a barrier against the transmission of vapor from the ground into the house.
5. Development of vapor barrier materials that can be successfully used on top of a slab-on-ground. Such vapor barriers must permit subsequent application of finish floor materials. Research on this subject was said to be urgently needed. The primary advantages of a vapor barrier on the top side of a slab are that the barrier would be laid smooth, and could be carefully inspected before the flooring is installed.
6. Development of tests to indicate the behavior of vapor barriers and separators under service conditions.
7. Investigation of perimeter insulating materials for slabs. Knowledge of the performance underground of these ma-

(Continued on page 398)



Plant and offices of O. E. McIntyre, Inc., Westbury, Long Island. Architects: Marcel Breuer and William W. Loudsberg, New York City. Contractor: Brown & Matthews, Inc., New York City. Windows: Lupton Steel Architectural Projected.

windows and walls—now both by Lupton

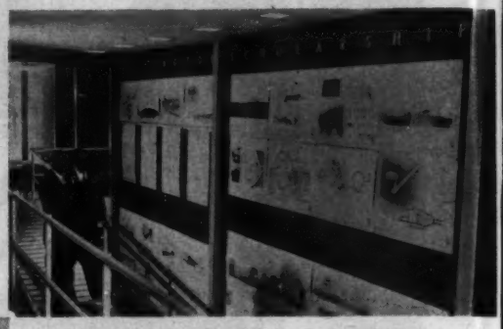
Lupton's fifty years' experience in designing and manufacturing metal windows forms the background for the successful, new Lupton Curtain-Wall System. Prefabricated modular panels — with panel color, texture and fenestration as specified by the architect — are made *and* installed by Lupton. The result is a faster, more efficient way to enclose a building, with direct savings in construction time and labor costs. Information is yours for the asking. Write for the "Lupton Simplified Curtain-Wall System". When it's windows alone you want, see the complete line of Lupton steel and aluminum windows in Sweet's.

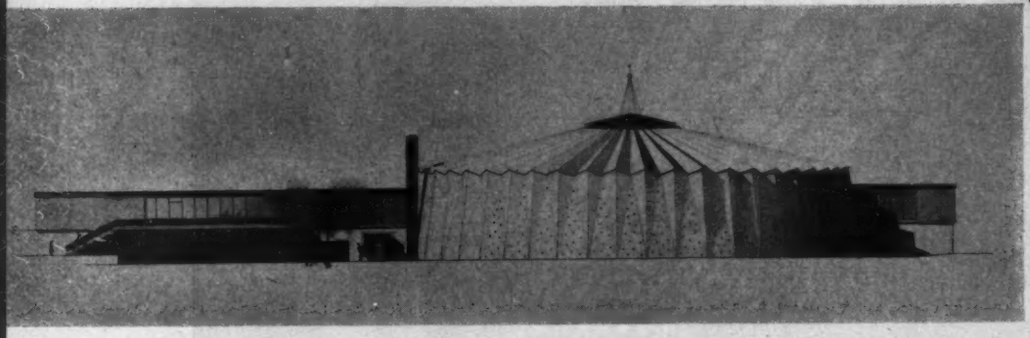
MICHAEL FLYNN MANUFACTURING CO.
Main Office and Plant: 700 E. Godfrey Avenue, Phila. 24, Pa.
New York Office: 51 E. 42nd Street, New York 17, N. Y.
West Coast Office: 672 S. Lafayette Park Place, Los Angeles 57, Calif.
Stockton Office and Warehouse: 1441 Fremont Street, Stockton, Calif.
Sales Offices and Representatives in other principal cities

LUPTON
METAL WINDOWS AND CURTAIN-WALLS

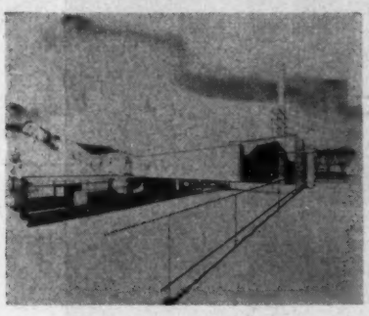
WINNERS OF THIS YEAR'S PILKINGTON COMPETITION

Five universities participated in the ninth annual edition of the Pilkington Traveling Scholarship competition for fifth-year architectural students — Manitoba, Toronto, McGill, British Columbia and Ecole des Beaux Arts (Montreal). Judges were J. C. Parkin, C. E. Trudeau, E. Fiset, D. Dunlop, G. D. Gibson and W. S. Goulding. The winner, who receives $1500 and expenses to Europe, is expected to spend six months studying architectural design in England, with subsequent visits to the Continent. Second prize is $100; third (given to each of two entries this year) is $50. Winning entries were exhibited at the R.A.I.C. annual conference in Halifax in June.

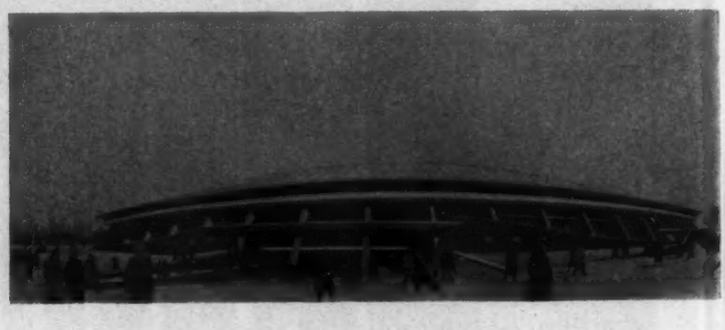




Above: view of exhibit. Left: first prize winner — "A Children's Theater," by R. B. Archambault, University of British Columbia. Below (left to right): second prize winner — "Mine Surface Plant, Fecunis Lake, Ont.," by O. Biskaps, University of Toronto; and the two entries tied for third place — "Une Bibliothèque," by Fernand Tremblay, Ecole des Beaux Arts, and "Un Palais des Sports," by Evans St. Gelais, Ecole des Beaux Arts

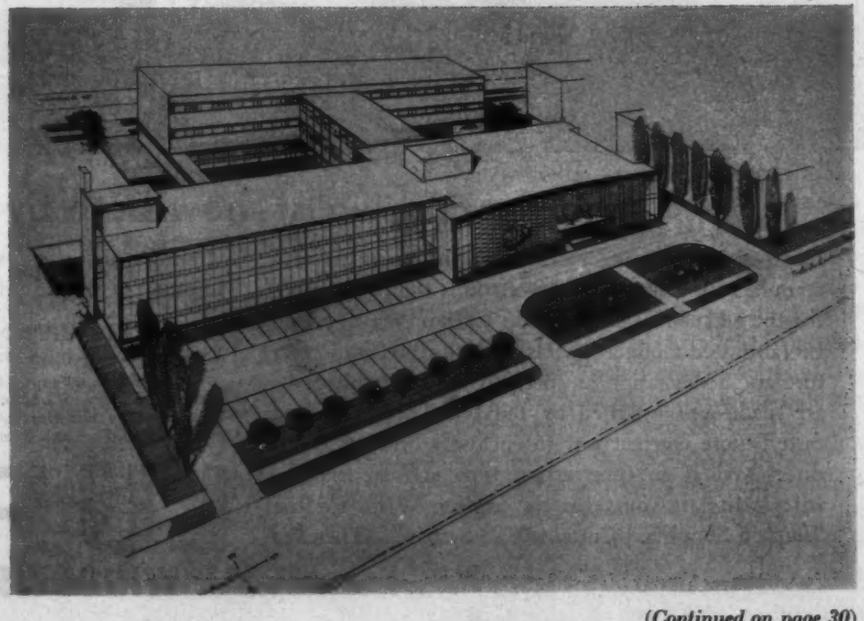






COURT DESIGNED TO LINK JUVENILE AND FAMILY PROBLEMS

The Juvenile and Family Court of Metropolitan Toronto, now under way, is the first of its type in Canada — an integrated court designed to handle juvenile delinquency along with family problems. The building will also make it possible for the first time to house all delinquent juveniles from the city area under one roof. Architects Page and Steele of Toronto have sought to create "a dignified and simple building that is devoid of all aspects of a jail, and provides pleasant and restful surroundings." The main block has five courtrooms for family matters, divorce and juvenile delinquency cases; probation offices, behavior laboratory, clinic, library and cafeteria are in separate wings. Juvenile block has rooms for one and two occupants, a small school, recreation facilities. Cost: $1,300,000 — $1.16 per cu ft, $14.35 per sq ft.



(Continued on page 30)



SURCO TERRAZZO type flooring is here tastefully blended with modern furniture to provide a cheerful and congenial atmosphere to this office lobby.

Although most of our floors are waxed this one has remained unwaxed since its installation nine months ago, yet it still retains a glossy finish.

SURCO TERRAZZO was applied ¼"-⅜" thick after the concrete slab was completely cured. In this particular installation no expansion joints were used. Drilling through the floors for telephone or electrical wiring presents no problem since SURCO TERRAZZO will not crack or craze from ordinary drilling operations.

For beautiful economical floors with resilience comparable to quality hardwood floors, use SURCO terrazzo-type material.

SURFACE COATINGS, INC.
110 Pear Street, S.E. • Atlanta, Georgia

See Sweets Architectural File for further information on SURCO products for home and industry.

SURCO

THE RECORD REPORTS

NEWS FROM CANADA

(*Continued from page 28*)

"HOME '55" COMPETITION AWARD WINNERS ANNOUNCED

This year's only cross-Canada competition in the field of residential design — the *Canadian Home Journal's* "Home '55" project — was recently concluded. First prize winner is Kenneth Henry Foster of Toronto, a young architect who took his architectural training on a veteran's educational grant following active war service. Money value of the first award is $1100, with extra fee of $750 for preparation of working drawings and specifications which the magazine will later make available to the Canadian public at a nominal charge.



Top winner in "Home '55" competition

Second prize of $650 went to Hunter J. White and Ralph Cole, of Vancouver, B. C.; and this team also won an honorable mention of $100 for a second entry. Third prize, $250, was awarded to George S. Abram, Toronto, who last year took first place.

The competition is open to registered architects only. This year's program called for a house "of outstanding architectural character," designed for a family with three children, and offering quiet areas for each member and a measure of privacy from street and neighboring buildings. Maximum floor area was set at 1525 sq ft.

Judges were George D. Gibson, president of the Ontario Association of Architects; Charles R. Worsley, design master, School of Architectural Technology, Ryerson Institute, Toronto; and Mary-Etta Macpherson, editor of *Canadian Home Journal*.

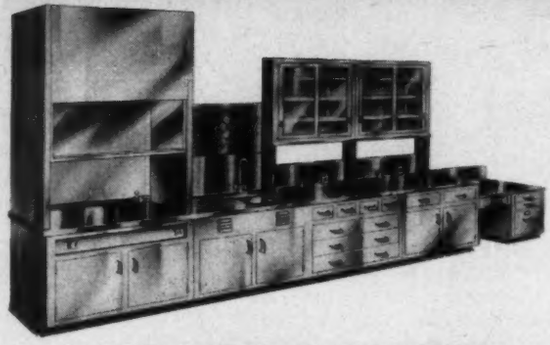
AIR TERMINAL FOR CALGARY TO DOUBLE AS CIVIC CENTER

One of the few air terminals in Canada financed and administered by the community rather than the Federal Department of Transport is Calgary's projected building, to cost an estimated $1,250,000.

Clayton & Bond of Calgary are architects for the terminal, which is planned to provide the city with a civic center as well. Space is provided for concessions and commercial displays, and the building is designed to permit later expansion in two directions.

(*Continued on page 32*)

METALAB
Equipment Company
SCIENTIFIC LABORATORY EQUIPMENT & FURNITURE



SEE FEATURE ARTICLE OF INDUSTRIAL LABORATORIES ILLUSTRATING THE JOHNS-MANVILLE RESEARCH CENTER—AT MANVILLE, NEW JERSEY, ONE OF THE MANY OUTSTANDING METALAB INSTALLATIONS.

LABRITECTURE
A New Technique in Planning Your Future Laboratory

A FORMULA FOR YOUR NEXT LABORATORY

METALAB equipment is superior — a fact that is universally recognized. Equally important is the integration and coordination of the respective units into a well-designed, functional and complete assembly. The end result must be the most and best for your laboratory budget dollars. The most successful approach to this type of installation is to avail yourself of METALAB's Engineering and Planning Service at no obligation.

For a FREE copy of METALAB'S completely illustrated Catalog 4B—write today on your company letterhead, or return the convenient coupon below.

METALAB Equipment Company
258 DUFFY AVE., HICKSVILLE, L. I., NEW YORK



METALAB EQUIPMENT COMPANY, Division of Norbute Corp.
258 Duffy Ave., Hicksville, L. I., N. Y.

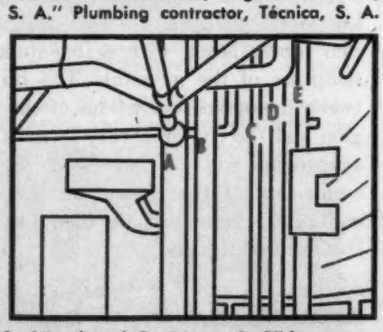
Gentlemen: ☐ Please send a copy of your new 180-page Catalog 4B.
☐ Please send condensed Industrial Catalog SD-3.

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____



Main pipe shaft. Note compact assembly made possible by the trim, space-saving copper tube and fittings. See pipe sizing diagram below, left.

Mexico's newest and tallest skyscraper. General Director: Adolfo Zeevaert, C. E. Constructed by the Engineering Department of "La Latino Americana, Seguros de Vida, S. A." Plumbing contractor, Técnica, S. A.



A. 8" soil stack. B. 6" vent. C. 3" hot water. D. 4" cold water. E. 3" waste for future use. Laterals to soil stack are 4". All sanitary drainage lines are Type M.

43-Story all-copper plumbing... in Mexico's tallest building

COPPER | **hot and cold water lines**
sanitary drainage system .
roof drainage lines

100,000 pounds of copper tube, Types K, L and M, provide lasting protection against rust in the plumbing system of this beautiful, ultra-modern office building of the Latino Americana Insurance Company, Mexico City. Tube sizes ranged from ½" to 12" incl. Anaconda tube was used throughout, with Nacional de Cobre of Mexico furnishing the smaller sizes.

For a skyscraper or a small home, copper tube plumbing saves installation time and effort... often the over-all cost is less. Its light weight makes it easy to handle. Standard 20' lengths eliminate many joints. Assembly work with solder-type fittings is quickly and easily accomplished.

For economical, non-rusting plumbing specify ANACONDA Copper Tubes and ANACONDA Solder-Type Fittings. A wide range of sizes are stocked by Anaconda distributors throughout the country. Descriptive literature is available. Write to *The American Brass Company, Waterbury 20, Conn.* In Canada: *Anaconda American Brass Ltd., New Toronto, Ontario.* 5311

for copper tubes see your

ANACONDA®

distributor

THE RECORD REPORTS

NEWS FROM CANADA

(*Continued from page 30*)

Site of the terminal is as close to the center of the runway pattern as possible, and an access road separates hangar areas from passenger- and cargo-handling areas. The hangars are located so they will not interfere with passenger station expansion, but to keep aircraft taxiing distances to a minimum.



Model of Calgary's new air terminal

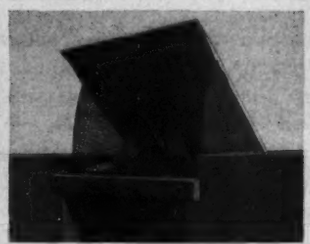


Needless to say, your reputation depends upon specifying the right materials and equipment to meet your clients' needs. Rite-Hite Adjustable Ramps for loading docks are built extra strong, give years and years of trouble-free service. Thanks to Rite-Hite's *exclusive precision counterbalance* principle (no pipes, pumps, gears or motors), only occasional "oil can" lubrication is needed. What's more RITE-HITE comes *complete* with every thing needed for installation. So, before you finalize those specs, investigate RITE-HITE—the loading ramps you can specify with confidence.

3 TYPES, 8 MODELS — TO FIT YOUR CLIENT'S NEEDS



PERMANENT. Integral part of loading dock. 5 and 10 ton capacities. 48" to 72" reach, 42" to 72" width, 14" horizontal adjustment.



SELF-CONTAINED. Non-permanent installation. Easy to move to various locations. 10 ton capacity. 48" to 72" reach, 72" width. 14" lateral adjustment.



FLUSH. Lock in position flush with dock surface. No levers or skirts to hinder dock traffic. 10 ton capacity. 48" to 72" reach, 72" width.

You can be sure—when it's RITE-HITE IT'S RIGHT!

Get full details today. **RITE HITE DIVISION** Dept. AR 95

LOOMIS MACHINE CO., 4th and PINE STS., Clare, Mich.

SYNAGOGUE FOR TORONTO DESIGNED AROUND COURT



The new Shaarei Tefillah Synagogue to be built in Toronto will be composed of three elements enclosing an entrance court. The *sanctuary* is designed to seat 500 people and includes such auxiliary facilities as meeting rooms, library and offices. A *social unit* will provide dining space for four hundred and kitchen facilities to service it as well as a stage. There will also be a separate *chapel*, with the entrance, cloakroom and washroom areas. The sanctuary and social unit will be on two sides of the entrance court, linked by the entrance and lobby section; the chapel will be above the entry.

Of his design, architect Irving Grossman says: "The sanctuary with its east wall of glass, through which may be seen a solid curved wall, is supported off the ground by slender exterior columns. Opposing is the social unit, placed on a low stone pedestal. Its east wall is a rich brown brick, with a free-standing sculpture of the menorah. The tie between the age-old traditions of the religion and the contemporary form of the synagogue will be expressed in the symbolism of the tablets on the east wall of the sanctuary, the menorah and the form of the dome."

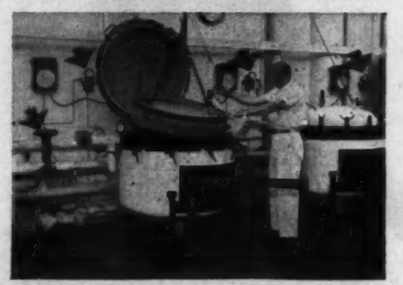
NEWS NOTES

John C. Parkin of Toronto has been elected president of the **Canadian Arts**

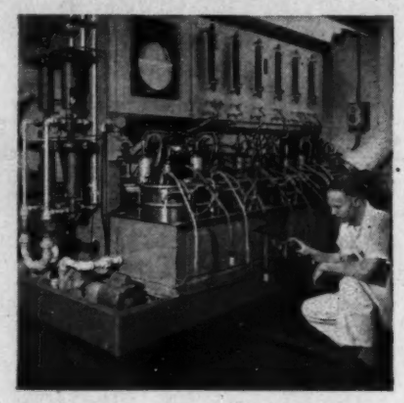
(*Continued on page 36*)



Shaker room and incubator in Fermentation Department. Powers Temperature Recording Controllers are used here.



Ampoule Sterilizers regulated by Powers No. 252 Pressure Regulators and Valves.



Fermentation process in research pilot plant controlled by Powers ACCRITEM Regulators and FLOWRITE Valves.



A few of the many vacuum dryers equipped with Powers Temperature Controllers.

Below: Air Conditioned Room for Board of Directors and executive conferences.



POWERS

AUTOMATIC temperature, humidity and pressure control

.... helps Abbott Laboratories bring better health to millions



Heating and Air Conditioning in many of the above buildings are automatically regulated by Powers Temperature and Humidity Control Systems.

Research at Abbott's has paid off in an unbroken dividend record, numerous stock dividends and splits. Many of their famous products such as Nembutal, Pentothal, Erythrocin, Iberol, Vi-Daylin, Selsun and Sucaryl have been developed in laboratories equipped with Powers control.

Versatility of Powers control used at Abbott's is indicated by some of the applications shown here and in the following installations: Air conditioning control systems for auditorium with 900 seating capacity, executive offices and dining room, cafeteria and animal rooms; also controls for tablet machines, demineralized water heaters, autoclaves and many other applications.

When you need automatic control for temperature, humidity or pressure, call your nearest Powers office or write us direct. An experienced Powers engineer will gladly help you select the right type of control for your requirements.

(c42a)

THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS | *Offices in chief cities in U.S.A., Canada and Mexico*

Over 60 years of Automatic Temperature and Humidity Control

NEW! contour HORIZONTAL TRANSPORTATION





ANOTHER OTIS FIRST! The Otis TRAV-O-LATOR is a modification of the world famous reversible Otis Escalator—another Otis first that was designed to move people, ***not materials!*** It's as easy to ride as an escalator. Its moving surface is an endless platform of metal escalator treads. It is smooth gliding for safe riding; cleated for safe traction; comb toothed for safe interlocking between treads and for safe stepping from moving treads to comb plates at entrance and exit points. In addition, it has the Otis escalator balustrades and handrails. All, long proven safety features.

There's practically no limit to the length, flexibility, or use of the TRAV-O-LATOR. Ask any of our 295 offices across the United States and Canada for details.

OTIS ELEVATOR COMPANY, 260 11th Avenue, New York 1, N. Y.

*Trade Mark

FIRST SAFE ELEVATOR, 1853 • FIRST ESCALATOR, 1900 • FIRST TRAV-O-LATOR, 1955

WITH THE Otis TRAV-O-LATOR*



BEEN THE BUSINESS OF OTIS



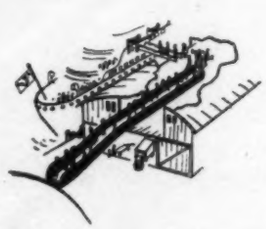
TRAFFIC CROSSINGS



AIRPORTS



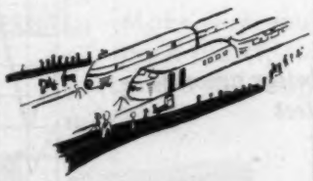
CITY CENTERS



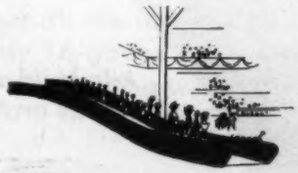
STEAMSHIP PIERS



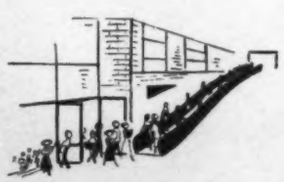
SHOPPING CENTERS



RAILROAD STATIONS



SPORT STADIUMS



SCHOOLS

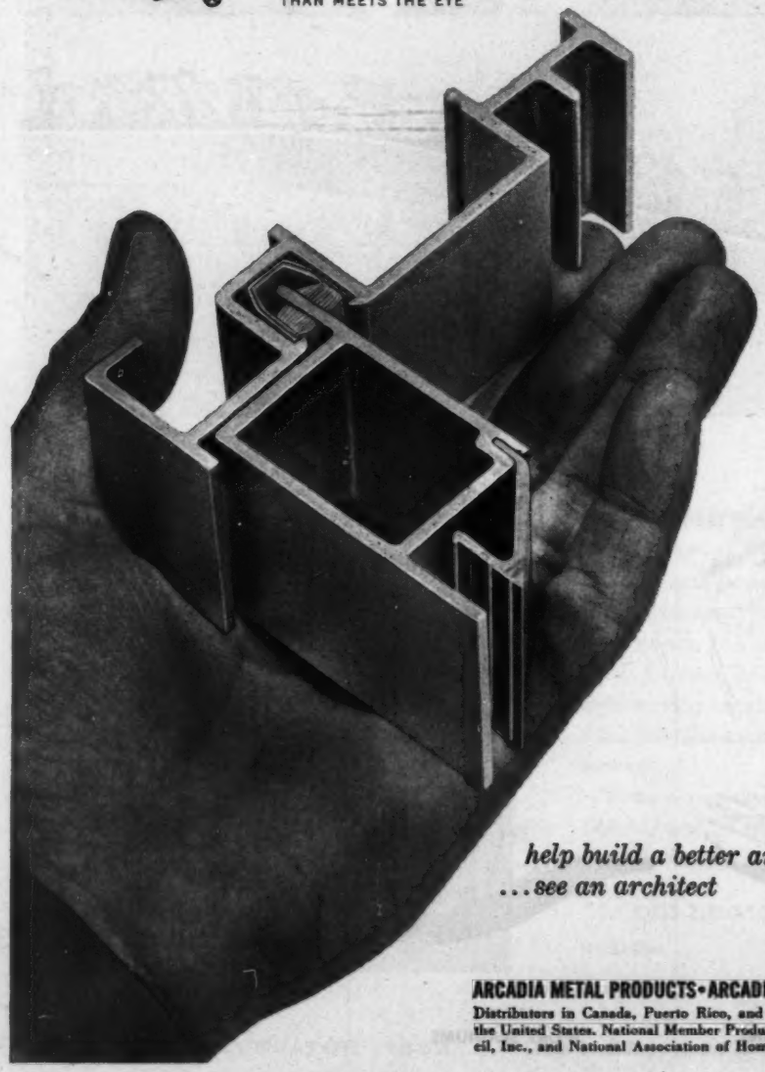
everyone talks about the weather

...But Arcadia solved the weather problem with Twin-Seal Wool Pile Weatherstripping—another important point of difference between Arcadia and other sliding glass doors.

Twin-Seal Weatherstripping on Arcadia's new custom aluminum door is shown below in a section at the latching jamb. A positive weatherseal between jamb and sliding panel is made by a double row of opposing wool pile weatherstrips. Wind, rain, cold and dirt are locked out tightly. Identical wool pile strips at head and interlocker, and a spring-loaded wool pile sill strip complete the four-side weatherseal. Arcadia's aluminum-backed weatherstripping, fully silicoated for moisture and abrasion resistance, is easily replaced without dismantling the sliding panel.

Twin-Seal Weatherstripping is just *one* Arcadia point of difference you should know about. Other important Arcadia features are detailed in our expanded 1955 Catalog 55-A. For a copy, phone your Arcadia distributor or wire us *collect*.

THERE'S MORE TO
arcadia *sliding glass doors*
THAN MEETS THE EYE



help build a better america
...see an architect

ARCADIA METAL PRODUCTS • ARCADIA, CALIF.
Distributors in Canada, Puerto Rico, and throughout the United States. National Member Producers' Council, Inc., and National Association of Home Builders.

THE RECORD REPORTS

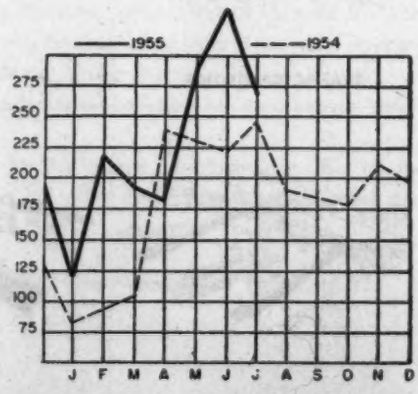
NEWS FROM CANADA

(Continued from page 32)

Council. . . . Cecil N. Blankstein succeeds Ernest J. Smith as president of the **Manitoba Association of Architects.** Other new members of the executive, elected at the Association's recent annual meeting, are Earle G. Simpson, vice president; Mrs. Douglas Chevrier, executive secretary; and Mr. Smith (ex officio). . . . The site and plan of the third of the four new communities to be created in **"Seaway Valley"** have been approved by the people who will live in it. The new town, likely to be known as Longue Sault, will merge populations of the existing villages of Milles Roches and Moulinette, which are to be flooded as a result of the St. Lawrence power development (see AR, Jan. 1955, p. 26). Approval has already been given for New Town No. 1 in Osnabruck Township and for the relocated village of Iroquois. The fourth community is Morrisburg. . . . The 32,000-member **Dominion Council of Professional Engineers** has called for nationwide adoption of a policy of selecting engineering services solely on the basis of technical training, experience and ability. The resolution, passed at the Council's annual meeting at St. John's, Nfld., is aimed at the practice of calling for tenders from professional engineers on design of public and private projects. George Demers of Quebec City was elected president of the Council for 1955. . . . Edgar A. Cross heads the **Association of Consulting Engineers of Canada Inc.** for a two-year term, following elections at the Association's annual meeting in Toronto.

Contracts Awarded: Comparative Figures*

(in $ million)



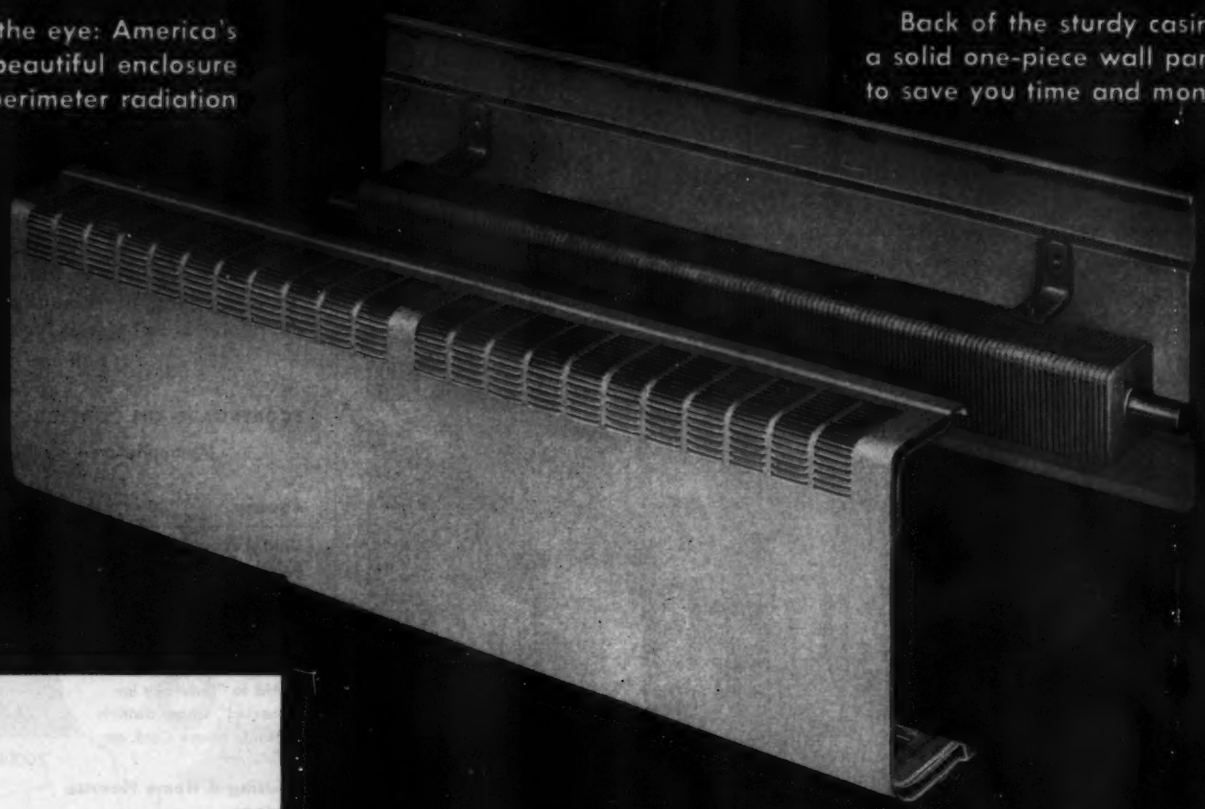
*Compiled by the editor and staff of *The Building Reporter*, from information collected by MacLean Building Reports

(More news on page 38)

Sill-line: Beauty backed by VALUE

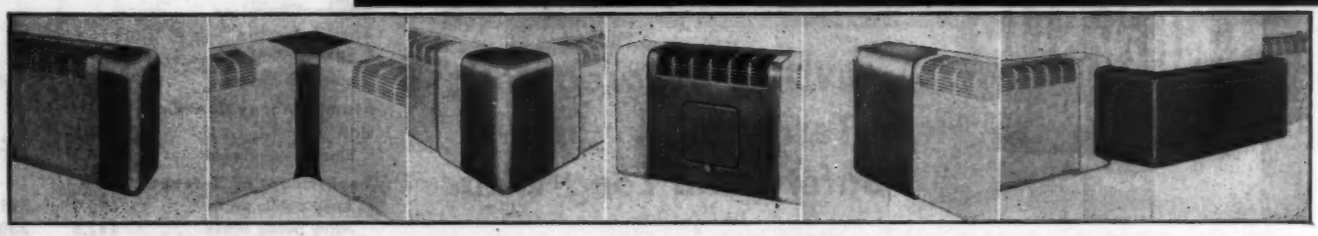
To the eye: America's most beautiful enclosure for perimeter radiation

Back of the sturdy casing: a solid one-piece wall panel to save you time and money



Built up to a standard, not down to a price

The heavier 16-gauge enclosure finished in baked enamel will forever remind you of its beauty and endurance. The standard one-piece back panel that covers raw walls and insures quick, rigid, true-alined installation more than pays its way in savings of time and face material.



Most for the dollar

Nesbitt Sill-line Radiation is today's best buy in perimeter heating. It offers the most beauty, comfort and convenience for the dollar. For use with steam or hot water; capacities, 2.9 to 11.1 sq ft EDR. Five cabinet types; seven lengths of casing and element from 2′ to 8′. Complete accessories and sleeves—no cutting on the site.

Insist on Nesbitt

Make sure you get all the features Nesbitt Sill-line offers: one-piece back panel, sturdy 16-gauge enclosure, baked enamel finish, and a full range of matching accessories. Send for Publication 102.



Nesbitt Baseboard Radiation
Ask for Publication 272



Nesbitt Convectors
Publication 262



Gas-fired Unit Heaters
Publication 280

Nesbitt
Sill-line Radiation

By Ernest Mickel

CONGRESS VOTES MORE FUNDS FOR 1956 BUILDING BUT CANNOT AGREE ON SCHOOL OR HIGHWAY BILLS

The first session of the 84th Congress adjourned sine die last month after providing more generously for most Federal and Federally-aided construction programs than last year (all but three items on ARCHITECTURAL RECORD's table show an increase) and after a harder last-minute struggle than usual to produce a housing bill that in the end nobody really liked — most especially the Administration. More of the President's program fell by the wayside in this session of Congress than he liked — as he made plain in his first post-session news conference, with some suggestion that there might have to be a special session of Congress this fall to get satisfactory housing and highway bills.

The Housing Bill

Public housing, was, as usual, the central issue in the battle for a housing bill; also as usual, the Senate was for a generous number of units — in this case a four-year program ranging from a minimum of 50,000 units annually to a maximum of 135,000 — while the House, always pulling in the other direction on public housing, this year passed a

(*Continued on page 326*)

SCOREBOARD ON CONSTRUCTION FUNDS

(Appropriations—in millions)

Agency	Fiscal 1956	Fiscal 1955
Civil Aeronautics Administration		
Federal aid to airports	$ 20.0[1]	$ 22.0
Dept. of Health, Ed. & Welfare		
Hill-Burton hospital constr.	111.0[2]	96.0
Aid to "federally impacted" school districts	24.0	118.5
White House Conf. on Education	200(th)	900(th)
Housing & Home Finance Agency		
Capital grants for slum clear.	50.0	39.0
Reserve planned public works	3.0	1.5
Urban planning grants	2.0	1.0
Annual contributions PHA	81.7	63.9
Veterans Administration		
Improve & modernize hospitals	30.0	47.0
General Services Administration		
Sites & planning, lease-purchase program	15.0	0.0
Atomic Energy Commission		
Plant & equipment	256.3[3]	110.8
Department of Defense		
Army public works	485.0	321.0
Navy public works	442.6	238.3
Air Force public works	994.2	857.2
Army Corps of Engineers		
Civil works construction	401.1	361.6
General investigations	5.9	2.9
Department of the Interior		
Bureau of Reclamation constr.	146.0	132.4
General investigations	5.1	3.7

[1] *Congress also authorized this year $43 million for this program. Authorizations would not belong in this table except for the fact that this is a contract authorization, which means Congress must appropriate the same amount of money authorized. It allows the agency to contract with states on the assurance Congress will later appropriate the money. In other words, it puts the airport program on the same basis as the highway program. Actually, then, the Department of Commerce can and will count on spending $63 million for airport construction this fiscal year.*

[2] *Of the $111 million, $90 million will go to the old program and the remainder to the four new categories authorized by Congress last year.*

[3] *AEC has unexpended balance of $101 million for this purpose it can add to appropriations.*



NON-SLIP
WET OR DRY

ALUNDUM Aggregate in Terrazzo . . . Spells Safety and Long Wear

Even on stormy days the floors and stairs in this entrance give walking safety because of ALUNDUM Aggregate in the terrazzo.

Here is attractive appearance as well as safety. In your plans for areas where ordinary floors would be slippery when wet, you can meet this condition by specifying terrazzo with ALUNDUM Aggregate — and you can be sure that your floors and stairs will show no signs of wear after years of heavy traffic.

See Sweets File or write for your own copy of the new edition of catalog 1935-R.

NORTON
NON-SLIP AGGREGATES

NORTON COMPANY
Worcester 6, Mass.

One of a series appearing in **FORTUNE, TIME, NEWSWEEK, BUSINESS WEEK** *and leading architectural magazines.*

"Personally, I always specify Lewin-Mathes Copper Tube"



We welcome stiff-necked specifications.

We meet them . . . because the copper we form into tube is first *refined by us* in our own plant.

We meet them . . . because Lewin-Mathes' *completely integrated operation* permits a standard of quality control—from raw material to packaged tube—that is unsurpassed anywhere in the industry.

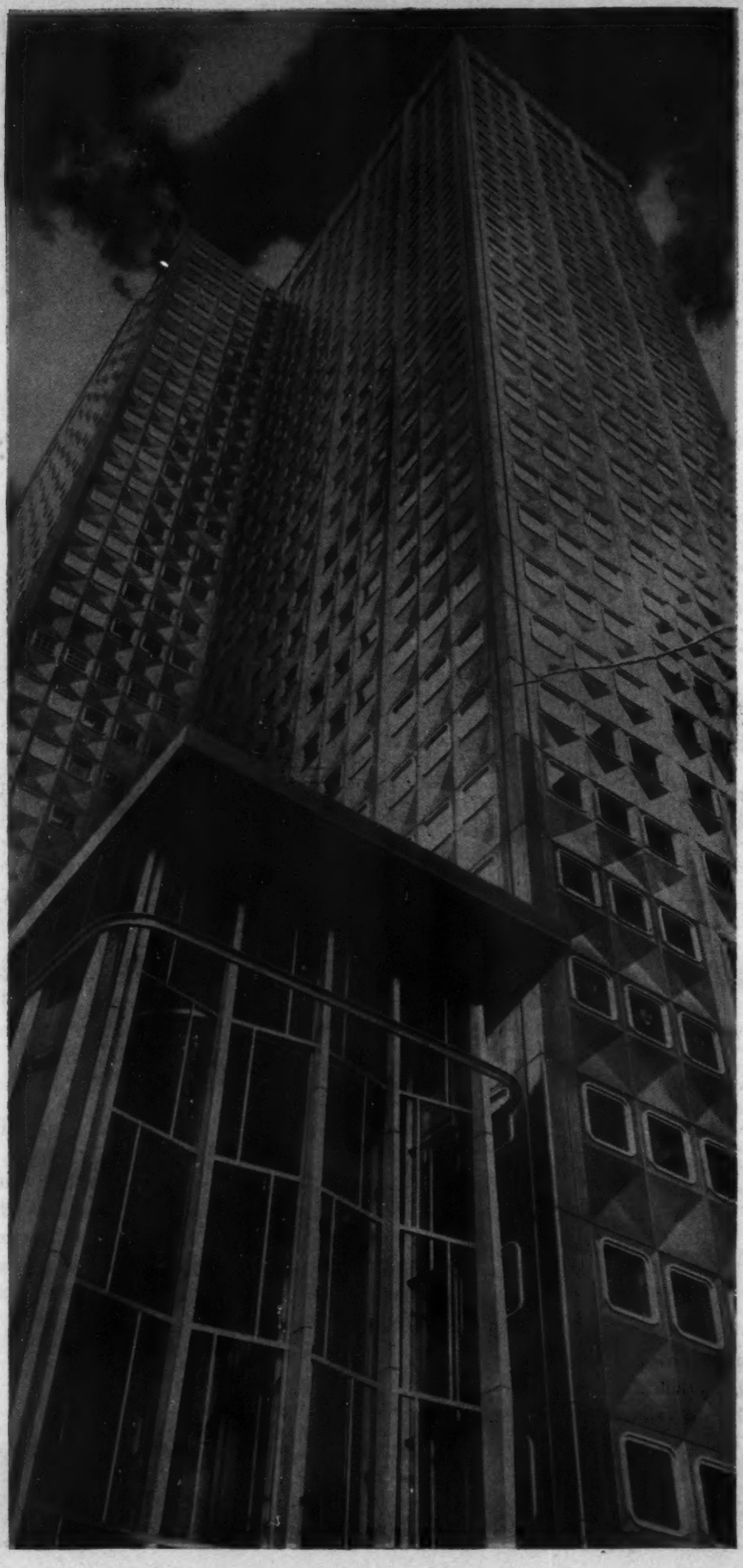
As refiners, we know the copper going into Lewin-Mathes Tube is pure. As fabricators, we painstakingly control every physical and chemical property of the finished product. And as *integrated specialists*, we take pride in delivering every foot of Lewin-Mathes Copper Tube uniform and perfect . . . to meet your most exacting requirements.

Nothing primitive **about Lewin-Mathes supply facilities. Our products are available through Wholesale Distributors, serviced by Lewin-Mathes Mill Depots throughout 48 states.**

LEWIN (M) MATHES

SAINT LOUIS, MISSOURI

MANUFACTURERS OF
COPPER AND BRASS TUBE, PIPE, ROD AND FITTINGS



Alcoa Building, (left), Pittsburgh, Pennsylvania
Architects: Harrison & Abramovitz
Associate Architects: Mitchell & Ritchey
Altenhof & Bown
General Contractor: George A. Fuller Company
Date of Adlake Window order: January 25, 1951

North Central Home Office
Prudential Insurance Company of America,
Minneapolis, Minnesota
Architects and Engineers: Magney, Tusler & Setter
General Contractor: C. F. Haglin & Son's Co.
Date of Adlake Window order: October 19, 1953

Prudential Insurance Company of America,
Chicago, Illinois
Architects: Naess & Murphy
General Contractor: George A. Fuller Company
Date of Adlake Window order: November 12, 1953

Shelby County Hospital, Shelbyville, Kentucky
Architects: Nevin & Morgan
General Contractor: Otho Tapp
Date of Adlake Window order: June 24, 1952

City County Building, Detroit, Michigan
Architects: Harley, Ellington & Day
General Contractor: Bryant & Detwiler
Date of Adlake Window order: January 12, 1953

Freeport Motor Casualty Company, Freeport, Ill.
Engineers and Contractors: The Austin Company
Date of Adlake Window order: June 2, 1952

East Unit, Baptist Memorial Hospital,
Memphis, Tennessee
Architects: Office of Walk C. Jones, Jr.
Consulting Architects: Samuel Hannaford & Sons
General Contractor: Harmon Construction Company
Date of Adlake Window order: June 23, 1953

Rockford Memorial Hospital, (right), Rockford, Ill.
Architects: Hubbard & Hyland
Perkins & Will
General Contractor: Security Building Company
Date of Adlake Window order: December 26, 1951

originated aluminum reversible windows?

Anyone can claim to—but **ADLAKE** can show installations sold as early as these!

There's a lot of talk these days about companies "developing" aluminum reversible windows—and we're rather flattered. For we like to think the sudden rash of "new" windows proves that a lot of people looked at the Adlake Aluminum Reversible Windows (that we sold 'way back in January, 1951) and liked what they saw.

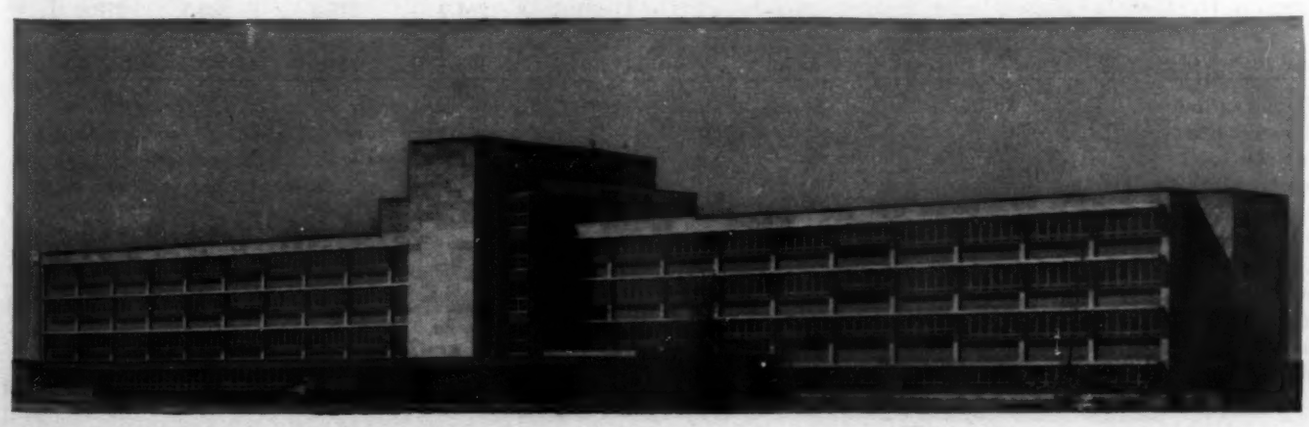
Take a look yourself—at the outstanding buildings listed here. They're all equipped with Adlake Aluminum Reversible Windows. (And just to keep the records all straight, we've put in the dates when the orders were placed with Adlake for the windows.)

As with all Adlake products, these windows had to undergo extensive testing before they were offered for sale, so the windows were designed and *developed* several years before the first order was placed. We believe Adlake was first with aluminum reversible windows, and until we see some installations that were sold earlier, we'll keep right on thinking so!

THE Adams & Westlake COMPANY

Established 1857 • ELKHART, INDIANA
New York • Chicago

Adlake 98th year of serving the transportation and building industries



CONSTRUCTION COST INDEXES

Labor and Materials — **U. S. average 1926–1929 = 100**

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
1953	281.3	277.2	281.0	286.0	282.0
1954	285.0	278.2	293.0	300.6	295.4
Apr. 1955	287.8	281.0	293.7	302.0	295.3
May 1955	289.3	282.3	294.2	302.5	296.0
June 1955	290.6	283.7	295.3	303.6	297.0
	% increase over 1939				
June 1955	135.3	131.8	125.9	127.6	128.3

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
1953	223.3	224.6	221.3	221.8	223.0
1954	219.6	219.1	223.5	225.2	225.4
Apr. 1955	222.6	222.8	225.5	227.4	228.2
May 1955	222.8	223.0	226.0	228.2	228.4
June 1955	224.3	224.9	227.2	229.2	229.6
	% increase over 1939				
June 1955	159.9	170.6	138.9	135.3	142.4

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
1953	263.4	256.4	259.0	267.6	259.2
1954	266.6	260.2	263.7	273.3	266.2
Apr. 1955	270.6	264.4	270.1	280.0	273.9
May 1955	272.8	266.1	271.1	281.0	275.1
June 1955	274.0	267.4	272.2	281.8	276.0
	% increase over 1939				
June 1955	148.6	149.9	129.3	135.2	131.9

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.6	259.7
1954	257.4	249.2	264.1	272.5	267.2
Apr. 1955	264.5	256.0	271.2	281.6	275.4
May 1955	266.3	257.5	271.9	282.3	276.3
June 1955	270.2	261.9	275.8	286.1	278.8
	% increase over 1939				
June 1955	155.9	163.7	134.9	134.7	139.3

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

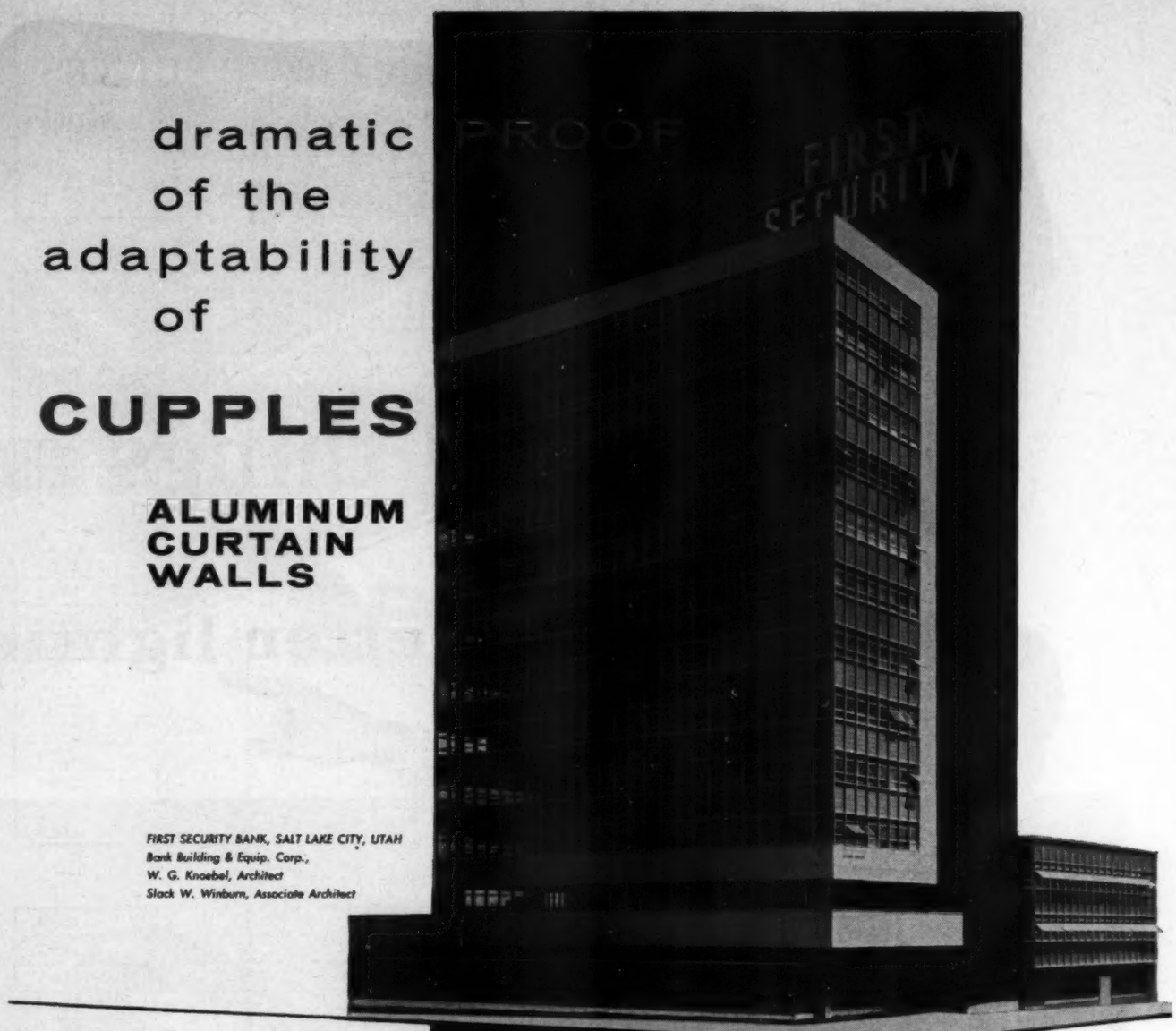
Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

dramatic
of the
adaptability
of

CUPPLES

ALUMINUM CURTAIN WALLS



FIRST SECURITY BANK, SALT LAKE CITY, UTAH
Bank Building & Equip. Corp.,
W. G. Knoebel, Architect
Slack W. Winburn, Associate Architect

With Cupples aluminum "skin" construction, panels of aluminum, stainless steel, structural glass or any other acceptable material may be specified.

For example, in this multi-story building, horizontal and vertical mullions and double weather-stripped tubular sash are aluminum. The structural grid system on stairwells, in penthouse and in other areas, also is aluminum by Cupples. All aluminum is in alumilite finish. Spandrels are fluted porcelain in off-white or rust.

Cupples' dominance in sound, economical curtain wall design, construction and erection keeps pace with its leadership in the fabrication of aluminum windows, doors, architectural aluminum extrusions, Alumi-Coustic grid systems for suspended ceilings and special ornamental products. Our catalogs are filed in Sweet's.

Cupples

PRODUCTS CORPORATION

2650 SOUTH HANLEY ROAD • ST. LOUIS 17, MISSOURI


When All things are c
...the better lighting c
School
Lighting
Store
Lighting
Factory
Lighting
BENJAMIN
Office
Lighting
BENJAMIN
All these things considered...
1. Specific Units for Every Need
2. Precision Construction
3. Low Installation Cost
4. Minimum Maintenance Cost
5. Lowest Over-All Cost
make BENJAMIN the
choice for better lighting!





. . . one of many Benjamin units to be considered for School Lighting from classrooms to auditoriums.



. . . one of a complete line of Benjamin units to be considered for Office Lighting from private offices to reception rooms.



. . . an example of the wide range of Benjamin "area lighting" units to be considered for all types of stores, restaurants, and other commercial locations.

consider:

Specific units for every need!

. . . it's one of the five essential considerations for Better Lighting! It assures the buyer of getting exactly the right unit for the seeing task . . . maximum results from every lighting installation . . . at lowest possible operating and maintenance costs. Benjamin brings you the specific unit for every need without compromise! When you specify Benjamin lighting equipment, you never have to settle for a second choice. Here is a line that is *really complete* . . . as complete as over 50 years of specialization in the manufacture of quality lighting equipment can make it.

Helpful folders on "Things to consider" for the lighting of schools, stores, offices and factories are yours for the asking. Write to Benjamin Electric Mfg. Co., Dept. Q-1, Des Plaines, Illinois.



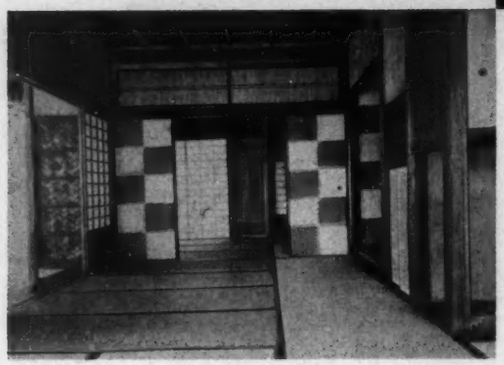
. . . just one of hundreds of Benjamin Industrial Units to be considered for Factory Lighting from assembly lines to foundries.

XB1037

BENJAMIN TRADE MARK **LIGHTING EQUIPMENT**

SOLD EXCLUSIVELY THROUGH ELECTRICAL DISTRIBUTORS







A LESSON FROM JAPAN

The Japanese House and Garden. By Tetsuro Yoshida; translated from German by Marcus G. Sims. Frederick A. Praeger, Inc. (New York) 1955. 204 pp, illus. $12.50.

By GEORGE BROWER CASH

The influence of Western culture in Japan has continued with even greater force since the end of the war in the Pacific. The reverse flow of influences, which centers architecturally on the Japanese house and garden, is augmented by this translation of Mr. Yoshida's recently revised German book, "*Das Japanische Wohnhaus.*"

The Western influence has penetrated primarily into the public life and architecture of the Japanese people, but in private life most Japanese have retained their adherence to the traditional way of life and the traditional way of architecture. The residential building aspect of the Japanese culture has not allowed itself to change suddenly. Consequently, the greater number of Japanese people, even in the larger cities, build and live in the traditional Japanese dwelling. This is the "wood, paper and bamboo" house that has so recently been highly publicized in our country.

Mr. Yoshida's book traces the historical development of this traditional house and is a valuable glossary of its planning and construction techniques and materials. There is some question, as Mr. Yoshida states, regarding how far the traditional Japanese house may have a determining influence in the domestic architecture of the present day, both in Japan and in the West.

The Japanese dwelling-house has developed primarily with reference to the principles of the traditional Japanese way of life and its particular environment and climate. Within this frame of reference, the Japanese house has little in common with our own objectives. It is, from a technical point of view, greatly insufficient in mechanical standards. To the contrary, it is impossible to deny the beauty that traditional Japanese residential architecture has achieved and which is excellently illustrated in the drawings and photographs of this volume.

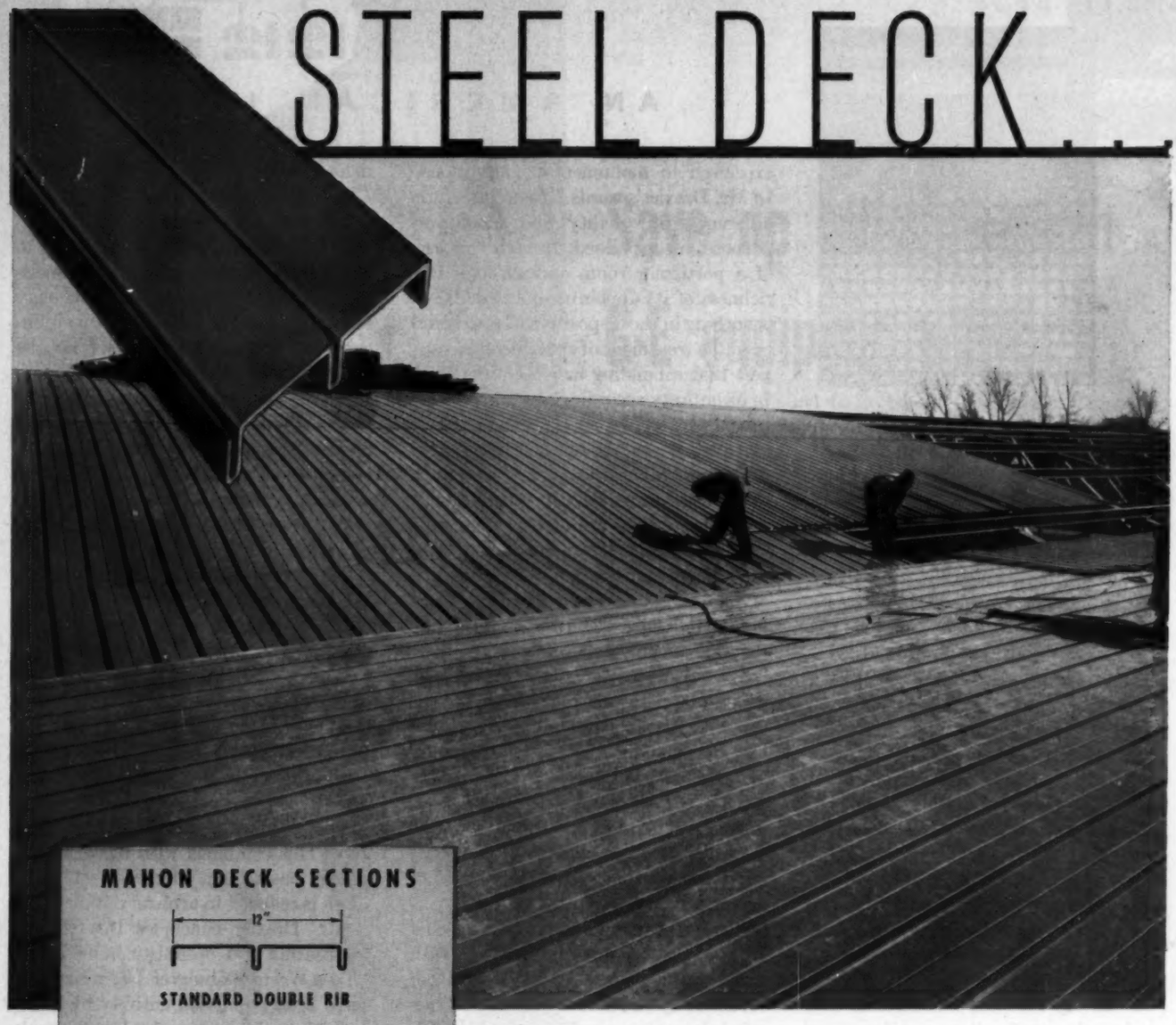
The most conspicuous point of the book that is especially valid for consideration, in an approach to our own residential architecture, is an explanation of the Japanese system of standardization. Standardization of the planning unit, structural components, and even the smallest parts in the Japanese house have played an important role in the aesthetic appeal of Japanese architecture. Far from being mechanical, it is through this standardization, Mr. Yoshida contends, that "the general as well as the individual character of the Japanese house is achieved" and "the unfettered individual self-expression of the architect is given depth and refinement and achieves universal significance."

This is a point well taken by the author, for it is, in great part, this very phenomenon of standardization that produces good architecture for the Japanese people, from the smallest to the largest residence. This is the state alluded to as the "cultural democracy" of Japan. We seldom, if ever, witness so high an overall standard of aesthetic order in our own residential construction, large or small. Standardization, seen in Japanese architecture as a firm and working principle, demands our attention in the pattern of our own domestic architecture, from public housing to private residences.

It is not the scope of this notice to dwell on all the features of the Japanese house and garden that are considered by Mr. Yoshida as determining influences on universal architectural problems. Many are commonplace in the language of our own contemporary architecture. Through Mr. Yoshida's book they achieve a further depth of meaning for our own practice as we see them exemplified in the illustrations of Japanese work.

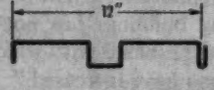
(Continued on page 48)

STEEL DECK . . .

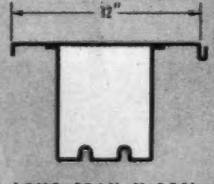


MAHON DECK SECTIONS

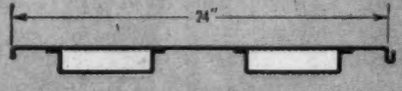
STANDARD DOUBLE RIB



WIDE-FLANGE DOUBLE RIB



LONG SPAN M-DECK
SECTION M1-G



LONG SPAN M-DECK
SECTION M2-A



LONG SPAN M-DECK
SECTION M3-A

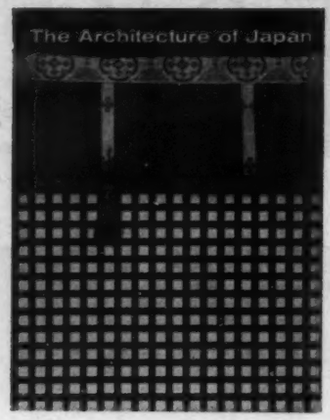
The illustration above shows Mahon Wide-flange Double Rib Steel Deck installed over bowstring trusses of a new roller skating rink. Year after year, Steel Deck roofs a greater percentage of new construction . . . and, it will continue to do so, because it weighs less and it costs less than any other type of permanent roof construction. Mahon Steel Deck is now available in the five Sections shown at left. The Long Span M-Deck Sections can be employed either with flat plate up or flat plate down . . . they span from beam to beam, eliminating roof purlins, and, when installed with flat plate up, they produce an attractive beamed ceiling effect. In either position, the bottom metal can be perforated and sound absorbing material inserted in the Cel-Beams to provide a highly effective acoustical ceiling. See Sweet's Files for information, or write for Mahon Catalogs D-56 and M-56.

THE R. C. MAHON COMPANY • Detroit 34, Michigan

SALES ENGINEERING OFFICES in NEW YORK and CHICAGO • Representatives in Principal Cities

Manufacturers of Steel Deck for Roofs, Partitions, and Permanent Floor Forms; Insulated Metal Walls and Wall Panels; M-Floors (Mahon Cel-Beam Floor Systems); Rolling Steel Doors, Grilles and Underwriters' Labeled Automatic Rolling Steel Fire Doors and Fire Shutters.

MAHON



AN AMERICAN IN JAPAN

The Architecture of Japan. By Arthur Drexler. The Museum of Modern Art (New York) 1955. 286 pp, illus. $6.50.

ARTHUR DREXLER, curator of the Museum of Modern Art's Department of Architecture and Design, visited Japan in 1953 in quest for knowledge of Japanese architecture from ancient times to the present. His journey resulted in this book and in the exhibition house by Junzo Yoshimura which is drawing crowds to the Museum's garden for the second summer.

In telling about the development of Japanese architecture Mr. Drexler uses legend and history artfully to make an interesting and colorful account. Certain presumptions about Japanese culture are confirmed by the author who endeavors to trace discipline in its various forms from foundation stones to mural decoration.

From the text and illustrations it is evident that art in all its manifestations affirms a preoccupation with refinement of form — for this reason perhaps, the Japanese sense of form is not clearly expressed in monumental conceptions. In Mr. Drexler's words, "In architecture differences in quality and mood, or purpose are expressed through the size of a particular room and through the richness of its appointments. But there is nothing in the disposition of the rooms or in the treatment of space itself to suggest that a building had been imagined in its entirety according to some preconceived abstract or spatial experiences."

A further reading reveals that a basic philosophy about the world they live in is far more important to their art and architecture than are the specific qualities of materials. To quote again, "The demands of climate, and the availability of materials and technical skills combine to influence architectural form, but they are themselves interpreted according to those patterns of response by which a society develops all of its concepts. Religious aspirations, philosophy and fortitude were evidently far stronger factors in shaping Japanese architecture than was, for example, the climate and yet no architecture in the world can be described as more closely related to its environment than the architecture of Japan."

The resulting buildings of post and lintel skeletal frame construction, with flexibility of plan, close indoor-outdoor relationship and decorative use of structural elements are well illustrated in *The Architecture of Japan.* Details of construction as well as interiors and gardens show beauty of restraint and the richness of tradition which are described.

The end of the war in the Pacific has seen a renewed interest of the Western World for things Japanese — and, as to be expected, the influence of the American way of life has made itself strongly felt in Japan. The impact of this influence has had a definite effect on the contemporary architecture in Japan. In the latter chapters of his book the author discusses this phase of Japanese architecture which has been disturbing students and admirers of the traditional.

It is his conclusion that contemporary architecture in Japan must first be international — visually and structurally related to technology before it could become specifically Japanese. He points out that in Japan, more than any other country, the tradition of pre-industrial buildings offers much that the modern architect finds sympathetic and useful — thus seemingly making the transition from tradition to technology easy. However, inherent in the apparently ordered and deep-seated Japanese tradition is a strong preference for irrational structure. This combined with modern technology has seldom succeeded and most often is reduced to arbitrary stylishness.

Mr. Drexler concludes this chapter on the not too optimistic note that: "To a Western observer Japan seems to have been populated entirely by gifted architects. The national talent for making buildings has not diminished, but the problems with which architects contend have increased."

JAPANESE FLOWER ARRANGEMENT

Ikebana. By Sōfū Teshugahara. Sogetsukai (Mita-Tsunamachi, Tokyo) 1952. 81 pp, illus. $9.00 (American distributor —George Wittenborn & Co., New York.)

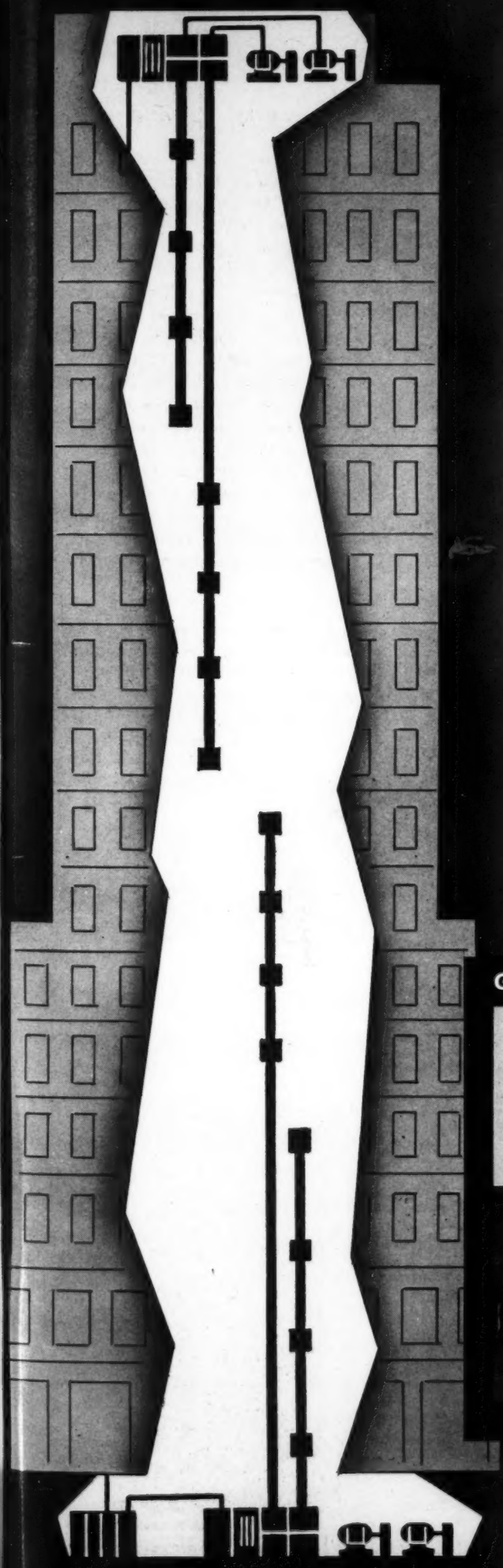
RESTRAINT AND REFINEMENT OF FORM are as evident in Japanese flower arrangement as they are in the more obvious art forms.

Ikebana (flower arrangement) as practised by Sōfū Teshigahara may be the epitome of formality. In the occidental world we are familiar with the formal, delicately wooden flower arrangements from Japan.

The work of Teshigahara is strong and highly abstracted in both form and color — the result is sculptural. To this reviewer his use of strident color and heavy form seemed, at first, unfamiliar and slightly repulsive. Further study revealed a powerful, beautiful art form — carefully executed.

Ikebana contains a biography of Sōfū Teshigahara and a critical analysis of his work by Sumio Mizusawa. Accompanying 30 or so striking full-color photographs by Ken Domon are comments by the artist on materials used and a bit of the philosophy necessary to achieve the results.





USE TABS FOR DETAILS OF . . .

POWER DISTRIBUTION

SAVINGS

SYSTEM PRODUCTS

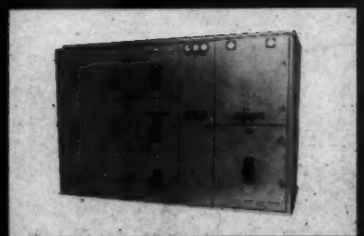
Save up to 25% with G-E equipped power distribution systems for commercial buildings

YOU BENEFIT THREE WAYS FROM G-E EQUIPPED 480Y/277-VOLT DISTRIBUTION:

1. **First-cost savings**
2. **Expansible, efficient system**
3. **Single equipment source**

This system can help designers, owners, and builders save 10 to 25 per cent on initial costs of distribution systems. Higher-voltage distribution provides an effective answer to today's heavy electrical loads. Its flexibility and economy allow realistic anticipation of the even larger loads of tomorrow.

GREATEST SAVINGS FROM . . .



PROTECTIVE DEVICES



RISERS AND FEEDERS



INSTALLATION



LARGE MOTORS AND CONTROL

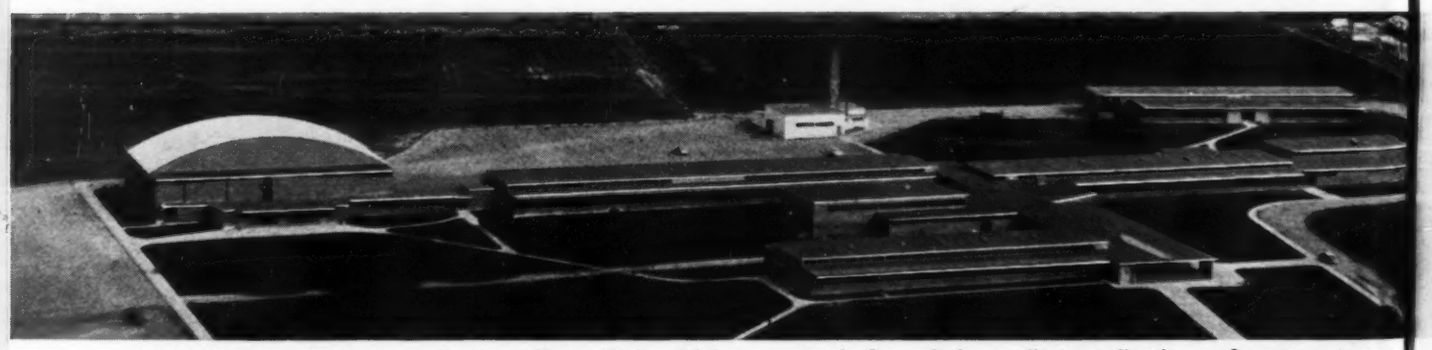
Progress Is Our Most Important Product

GENERAL ELECTRIC

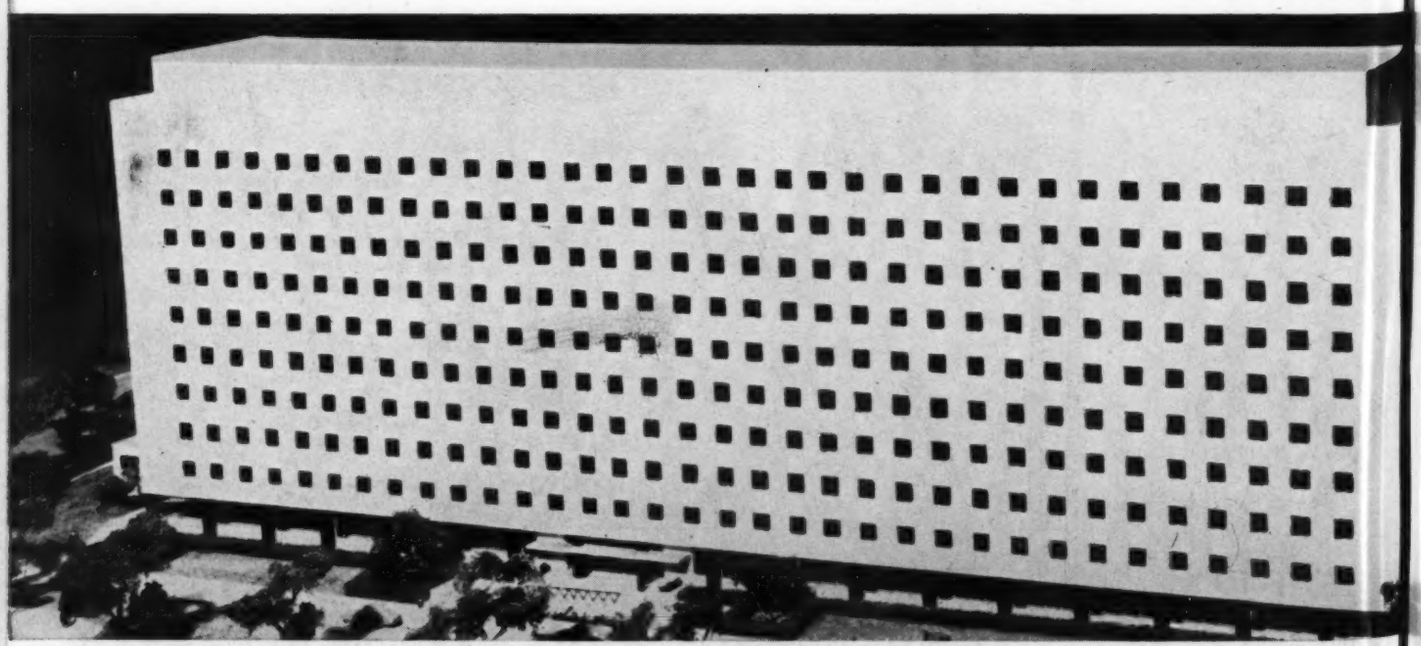
FOR GUIDE TO YOUR OWN SAVINGS MAIL COUPON ON LAST PAGE OF THIS AD



$1,500,000 SAVINGS on equipment were obtained when system was selected for New York Coliseum. Combining 365,000 sq. ft. of display space with 26-story building presented unique opportunities for savings with the higher-voltage system. Leon and Lionel Levy, architects; Guy B. Panero Engineers, consulting engineers; Walsh-Fuller-Slattery, general contractors; Jackson-Livingston, electrical contractors.



$12,000 SAVINGS resulted at Twin Falls, Idaho High School with 480Y/277-v system even though 120-v load was large percentage of total. One of the earliest applications of new system, school provides ideal example of savings possible in small horizontal buildings. School's demand totaled only 600 kva.



$20,000 SAVINGS were obtained with 277-v lighting in Pennsylvania's new office building for the Dept. of Property & Supplies, Harrisburg, a Gen. State Authority project. Here system proves value in longer, lower building. Lacy, Atherton and Davis, architects and engineers; The Howard P. Foley Co., electrical contractors.

Higher-voltage systems can pay off for you as they did in these four buildings

Average electrical loads in commercial-type buildings have grown to equal many in industrial plants (approximately 10 volt-amperes per sq. ft.). With increased use of air conditioning, electronic equipment, appliances, and better lighting, loads will continue to grow.

ARCHITECTS, CONSULTING ENGINEERS, contractors, and owners must provide a first-class power distribution system to meet today's demands and anticipate tomorrow's needs—yet keep costs within reason.

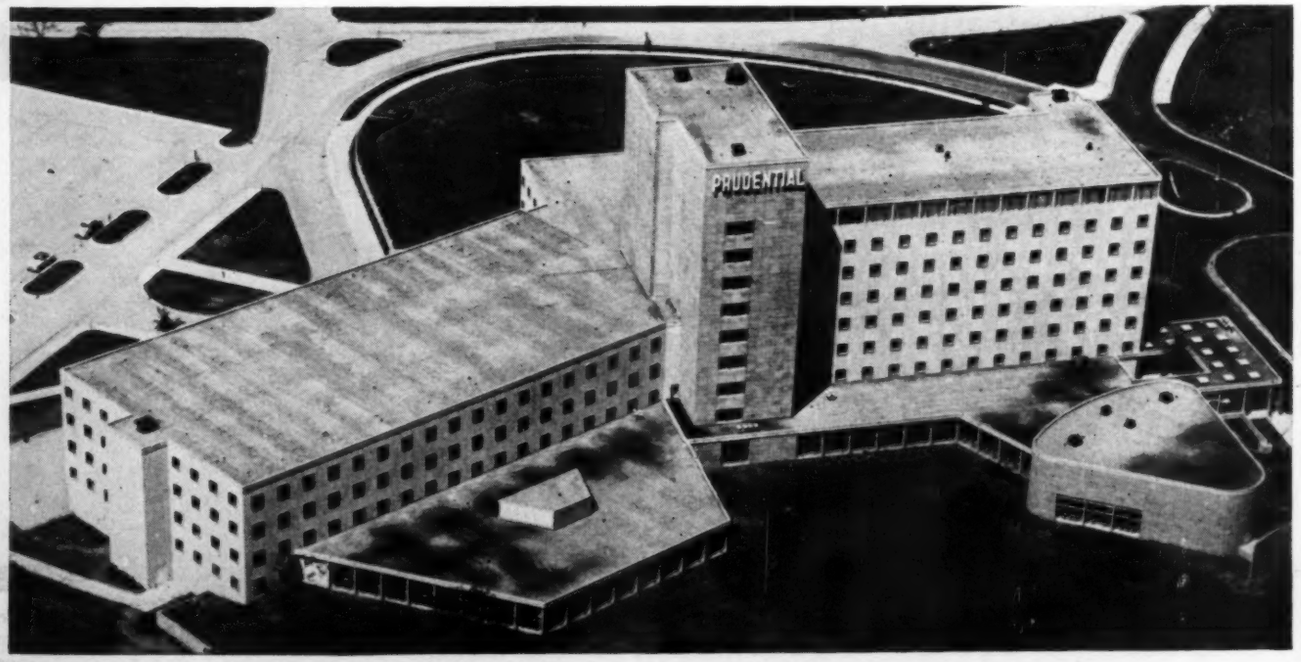
ONE SOLUTION IS TO SELECT 480Y/277-volt power systems when remodeling old or constructing new buildings. The success of this G-E equipped system in the four buildings illustrated is dramatically indicated by the large savings made.

Comparable savings with this system exist when 33 to 50% of building load can be served direct from system voltages and when feeders average 200 feet in length. For detailed cost and savings information, use coupon on last page of this ad, or contact your G-E Apparatus Sales Office.

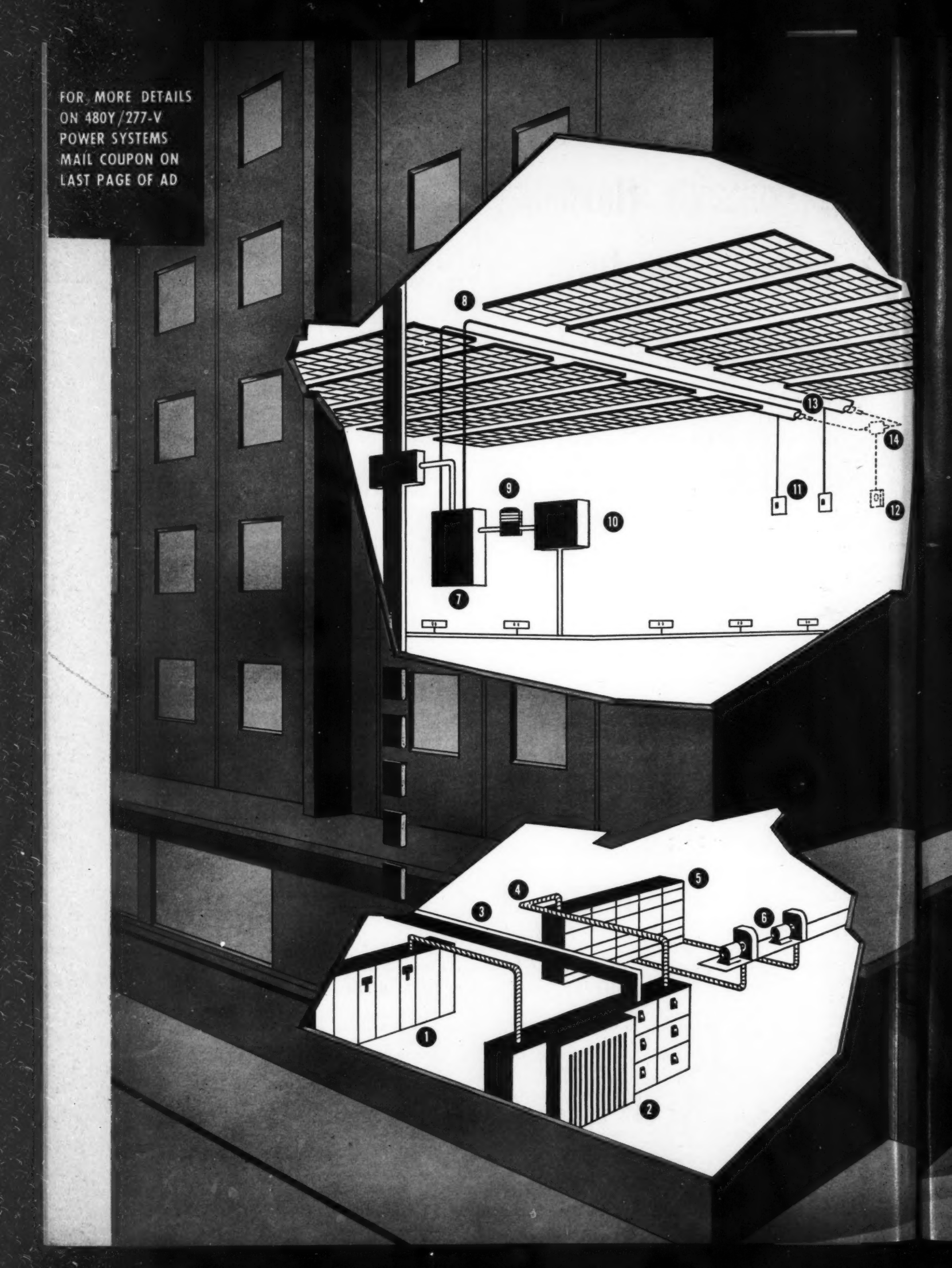
SEE HOW THIS SYSTEM WORKS ▶

GENERAL ELECTRIC

$50,000 SAVINGS came from using system at Prudential Insurance Co. office building, Minneapolis. Rambling wings and 10-story tower make system ideal. Magney, Tusler & Setter, Inc., architects and consulting engineers; C. F. Haglin & Sons, general contractors; Electric Repair & Const. Co., electrical contractors.



FOR MORE DETAILS
ON 480Y/277-V
POWER SYSTEMS
MAIL COUPON ON
LAST PAGE OF AD



G-E higher-voltage systems provide flexibility to meet future demand, use lower-rated equipment to supply larger loads

Because volumetric and floor space in commercial-type buildings is so valuable, substations usually must be located in basements and penthouses. This can mean long runs for secondary feeders. The greatest savings with higher-voltage distribution come from ***halving*** either the number and/or size of these feeders and their branch circuits.

SAVINGS CAN AMOUNT TO $30 PER KVA of demand. Conductors carry two to four times the power they could at 120/208Y volts—meaning fewer and smaller circuits and great savings in copper needed throughout system. In addition, lower rated and fewer circuit breakers are needed since lower-current distribution at higher voltage allows each breaker to serve more kva load. Motors above 500 hp cost less at 480 volts. Motor control at the higher voltage costs less for any motors. Higher-voltage distribution also cuts feeder voltage drop, watt losses. Because less equipment and smaller equipment is needed, installation is easier, less expensive. Much valuable space is saved.

When time comes to expand capacity, original savings and advantages are repeated. More new equipment can be installed in space that would have been used initially with a 120/208Y-volt system. When modernizing old buildings it is often possible to ***retain original conductors*** and conduits, switch to higher voltages and increase capacity.

120-VOLT POWER IS PROVIDED by small low-cost transformers. Greatest savings occur when 277-volt lighting is used, ***but*** studies show big savings may still exist even if ***all*** lighting operates at 120 volts supplied from small transformers. For full information on this economical, flexible system, send coupon on last page of this ad, or contact your G-E Apparatus Sales Representative.

SEE STANDARD EQUIPMENT FOR USE IN THIS SYSTEM ▶

GENERAL ELECTRIC

HERE'S HOW 480Y/277-V SYSTEM FITS A TYPICAL BUILDING

Cutaway shows components of higher-voltage system for building supplied with primary power by the utility.

Incoming power is brought through metal-clad switchgear (1) and distributed to unit substations (2) which step voltage down to required 480Y/277 volts. Busway or cable risers (3) carry power up to each floor while feeders (4) distribute it to motor control centers (5) for the air-conditioning, elevator and ventilating-fan motors (6).

On each floor power runs from risers to panelboards (7) supplying 277 volts for lighting (8). Circuit also runs from this panelboard to small dry-type transformer (9) which furnishes power through a second panelboard (10) to the 120-volt floor circuits.

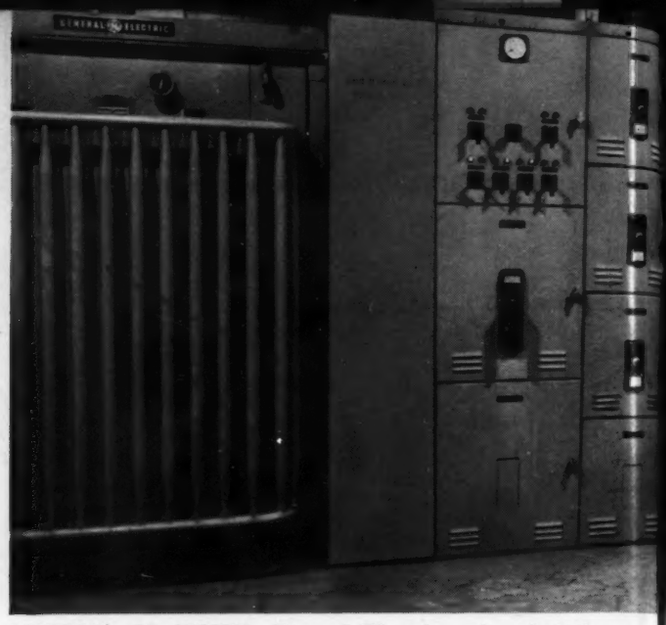
Lighting power may be safely controlled by conventional wall switches rated 20 amps, 277 volts (11) or by 24-volt remote-control switches (12). If remote control is used, relays (13) are required to accomplish switching and small transformers (14) to supply 24-volt power to remote-control switch for activating relays.

If secondary power (utilization voltage) is supplied by the utility, system begins at low-voltage switchgear section of substation.

FOR MORE DETAILS ON G-E EQUIPMENT FOR POWER SYSTEMS MAIL COUPON ON LAST PAGE OF AD



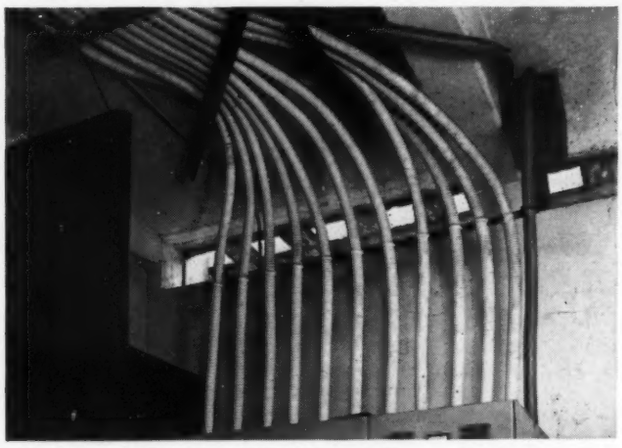
RELIABLY GUARDING system at entrance, G-E metal-clad switchgear is factory preassembled to save installation time. G-E magne-blast breakers are safer and easier to maintain.



KEYSTONE OF SYSTEM, General Electric unit substations dependably furnish power, close to load as possible, on well-protected circuits. They arrive at site in integral units



COMPACT G-E motor control centers place all control in easy reach and view of operator. Ready-to-install units are fully accessible to make connecting and servicing easier.



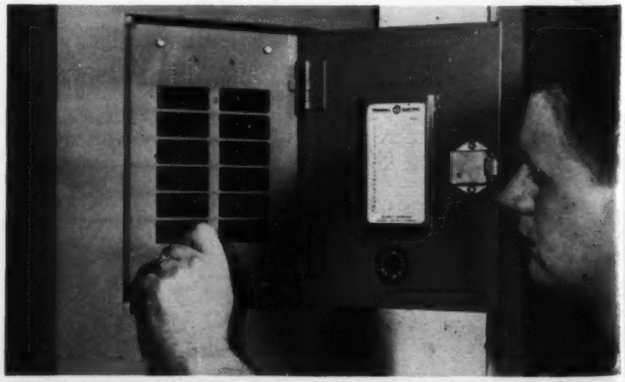
FASTER, LOWER-COST INSTALLATION is possible with risers and feeders of flexible G-E interlocked armor cable. Simple to install, it bends easily around obstructions, needs no conduit.



SAFER, SURER PROTECTION and control of 277-volt circuits result with General Electric panelboards. Designed to take less space, they provide ample room for easy wiring.



LOW-COST SOURCES OF 120-volt power, G-E dry-type transformers feature simple installation, quieter operation. They can be mounted almost anywhere, require little attention.



QUICK, EASY WIRING of G-E 120-volt panelboards is facilitated by roomy wiring gutters, all solderless connections. These 120-v circuits serve portable machines, appliances.



ready for quick installation. Compact and flexible, they fit into system wherever space is available, serve as "building blocks" for expansion.



LOW-VOLTAGE-DROP DISTRIBUTION is provided by risers and feeders of G-E Flex-A-Power* busway. It assures most efficient service on necessary long runs. Prefabricated sections and fittings provide easy, flexible installation.

POWER DISTRIBUTION PRODUCTS

Standard G-E products, available from single source, ease system planning, application, purchasing

General Electric offers all the needed electric equipment for any power distribution system. Packaged purchasing of all distribution equipment from one supplier assures smoother integration and performance of system. Design, accounting, and clerical work is saved by the convenience and efficiency of dealing with only one central source of equipment.

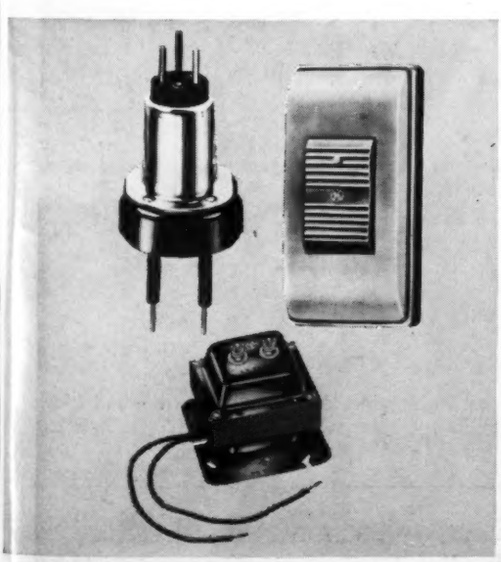
G.E. CO-ORDINATES EQUIPMENT DELIVERY with your construction schedules—no waiting for needed items nor storing of those shipped too early. Installation is speedier because factory assembling of major equipment groups saves valuable time at site.

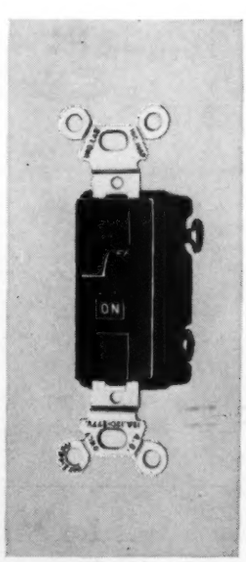
Uniform General Electric equipment fits easily together into a highly dependable, attractive system because units are naturally designed to look better and work better together. Mail coupon on last page of this ad for more details on packaged vs. piecemeal systems, or contact your nearest G-E Apparatus Sales Office.

*Reg. Trade-mark General Electric Co.

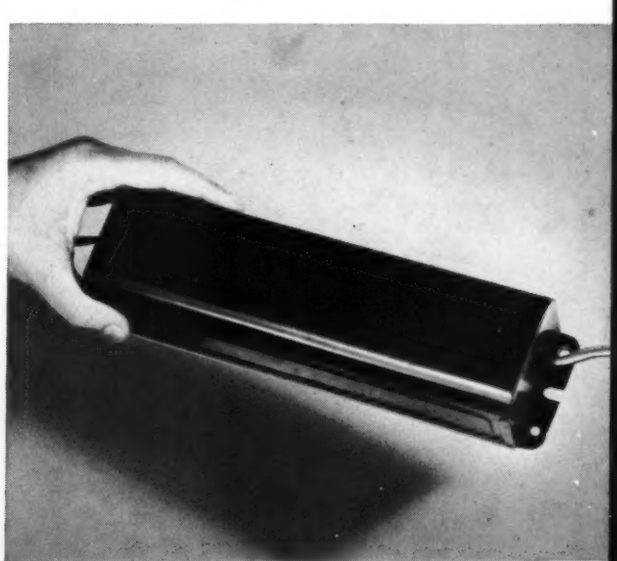
SEE ENGINEERING SERVICES AVAILABLE TO YOU WITH G-E EQUIPMENT ▶

GENERAL ELECTRIC





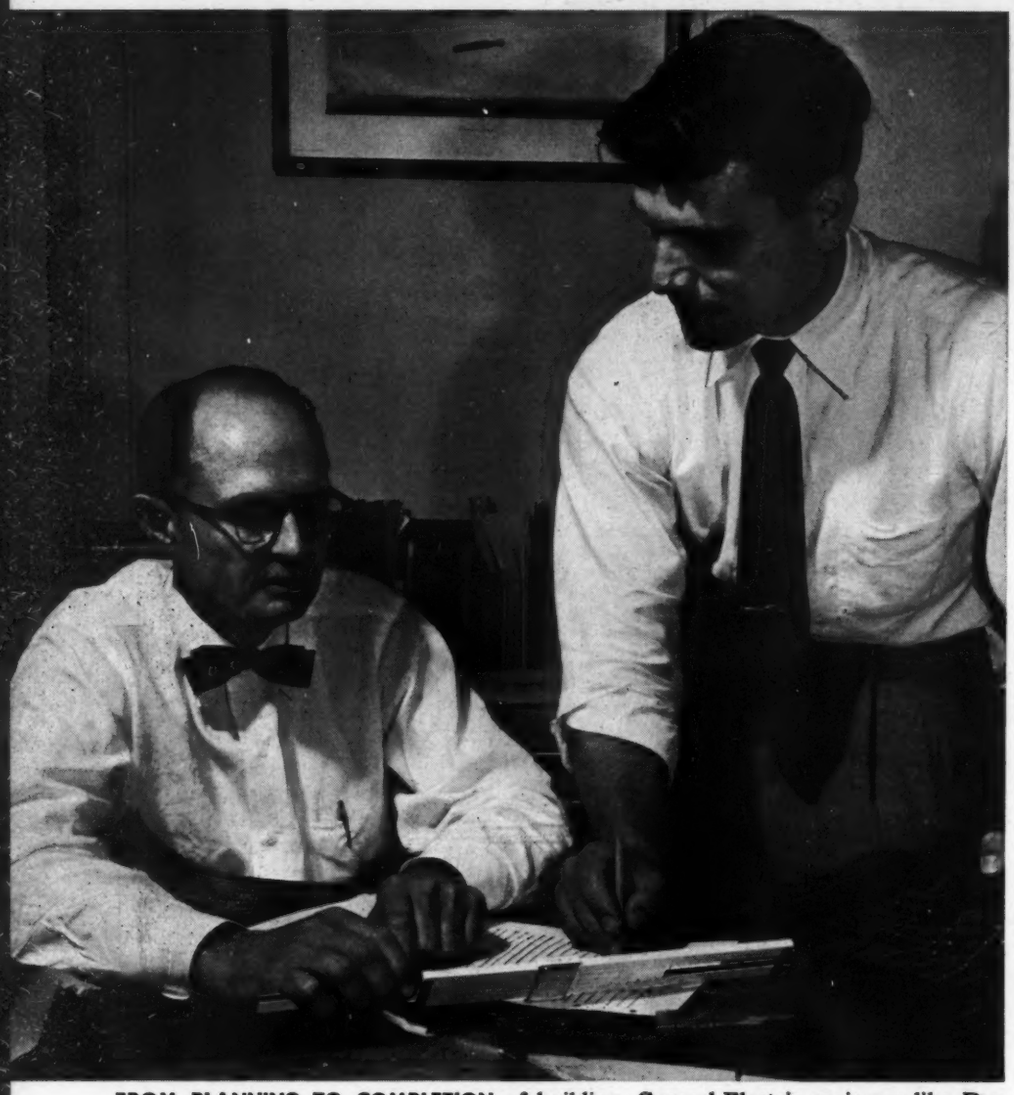
APPROVED SWITCHES for 277-v lighting include either new conventional snap switch (right) or remote-control switch (left), which uses small transformer to supply 24-v power to relay operating coils.



AVAILABLE AT NO EXTRA COST in larger lots of popular ratings, 265-v lamp ballasts serve lighting with longer, quieter operation, common to all G-E ballasts.

SIX G-E ENGINEERING SERVICES . . .

HELP PROTECT YOUR EQUIPMENT INVESTMENT



FROM PLANNING TO COMPLETION of building, General Electric engineers like Don Beeman (left) and Howard Kurt (right), both pioneers in development of 480Y/277-volt systems, help you select and apply the right electrical equipment for efficient operation.

1. G-E APPLICATION ENGINEERING helps architects and consulting engineers select and design the right electric system.

2. G-E ANALYTICAL ENGINEERING helps design the optimum electric system. Engineering experience, backed up by electronic system analyzers, save valuable design time.

3. G-E PRODUCT DEVELOPMENT laboratories design and test new equipment under tomorrow's conditions to meet future demands.

4. G-E FIELD-SERVICE ENGINEERING helps supervise installation, expedite start-up of major electric equipment.

5. G-E MAINTENANCE SERVICE from 32 G-E Service Shops will repair and uprate old equipment, help establish productive maintenance of equipment, furnish emergency service.

6. G-E PROJECT CO-ORDINATION means on-time engineering, shipment, installation of electric equipment from preliminary planning through start-up.

THESE SERVICES CAN WORK FOR YOU when you specify G-E equipment. Your G-E Apparatus Sales Representative can help you obtain any or all of them—contact him. For full story of the service available with G-E power distribution equipment, mail coupon below. General Electric Co., Section 680-1A, Schenectady 5, N. Y.

Progress Is Our Most Important Product

GENERAL ELECTRIC

MAIL TODAY for more information on modern power distribution systems



GENERAL ELECTRIC CO.
SECTION 680-1A, SCHENECTADY 5, N. Y.

Please send me:

☐ **your basic brochure, "Modern Power Distribution Planning Guide" (GEA-6344).**

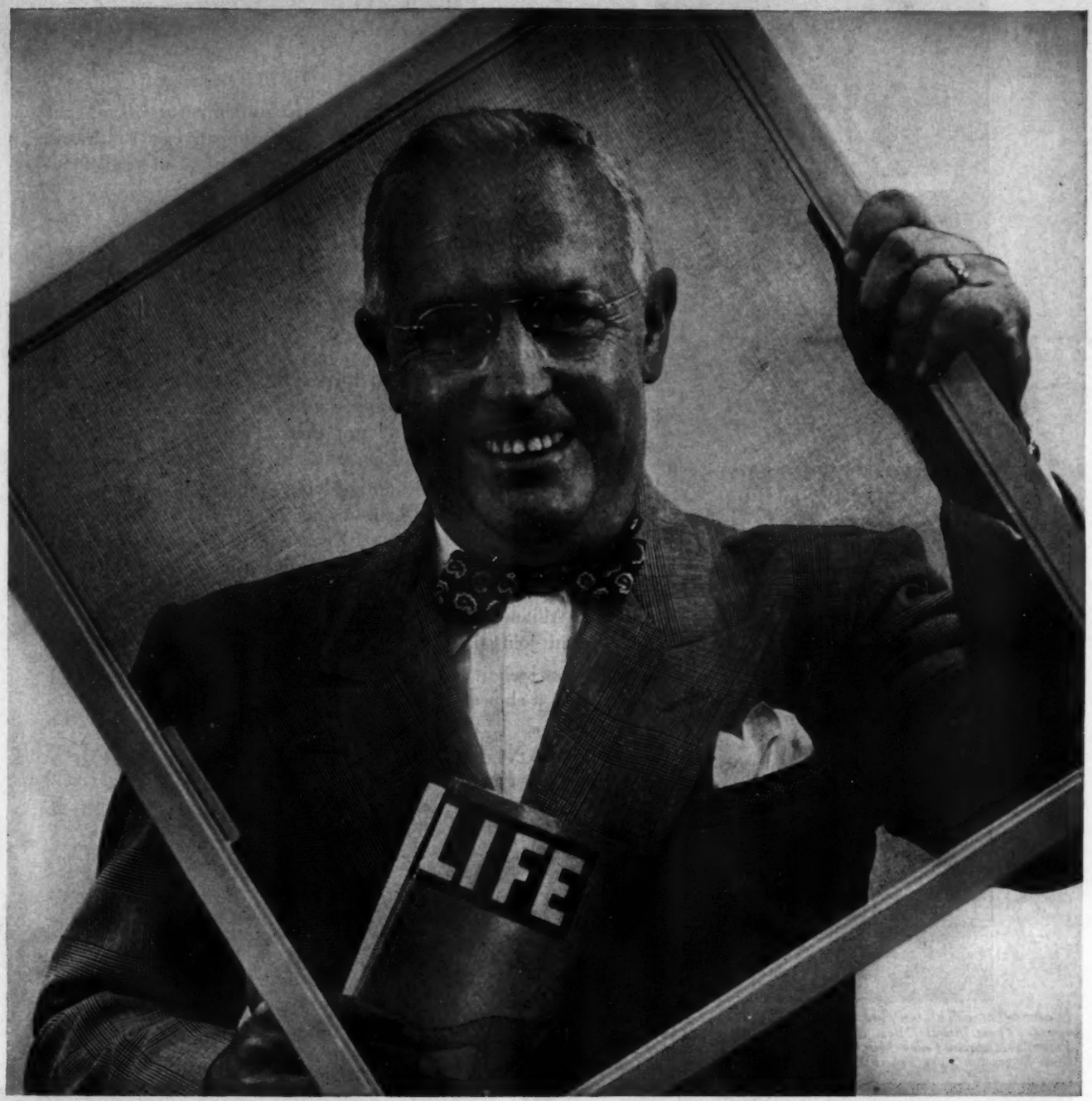
☐ I am especially interested in power distribution for buildings within secondary network areas, so include "Modern Distribution Equipment for Commercial Buildings in Secondary Network Areas" (GEA-6223).

NAME _____

POSITION _____ **COMPANY** _____

ADDRESS _____

CITY _____ **STATE** _____



FRANK C. RUSSELL, president of the F. C. Russell Co., manufacturers of Rusco windows and doors, Cleveland, Ohio

Frank C. Russell proves a point — "It's a combination you can't beat: An exciting *promotable* new product with a walloping promotion behind it."

CHICOPEE FIBERGLAS* SCREENING

Chicopee Mills, Inc., Lumite Division, 47 Worth Street, New York 13, N.Y.

*T. M. O. C. F. Corp.

CAREY

Holiday Homes

FEATURE

ALLIANCEWARE FIXTURES

FOR BATH AND KITCHEN



In connection with his building activities Mr. Carey has received many awards. These include "Best Homes for Families with Children" by Parent's Magazine; also Minneapolis Honeywell's "National Home Week Promotion" and Practical Builder's "Merchandising Contest."

Designed by one of Denver's leading architectural firms and built by the Carey Construction Company in southwest Denver, Holiday Homes combine the comfort of traditional design with handsome, contemporary styling.

Within minutes of Colorado's famous mountain parks, the Carey development comprises over 125 homes, 100 of which have been completed, with others now in the planning stage. Smaller homes range from $12,000 to $15,000, with larger homes up to $20,000.

No matter what the price range, Holiday Homes are of the finest construction. All bathroom fixtures are AllianceWare and every kitchen is equipped with an AllianceWare double-bowl sink. The builders know that AllianceWare meets their demands for quality throughout.

AllianceWare-porcelain-on-steel has unusual features appreciated by builder and home owner alike. Every AllianceWare tub has a patented "grab-rail" construction for safety in entering and leaving the bath. The exclusive AllianceWare wall hung method of installation keeps tubs from shifting or settling. The AllianceWare wall-guard flange prevents seepage where the tub joins the wall.

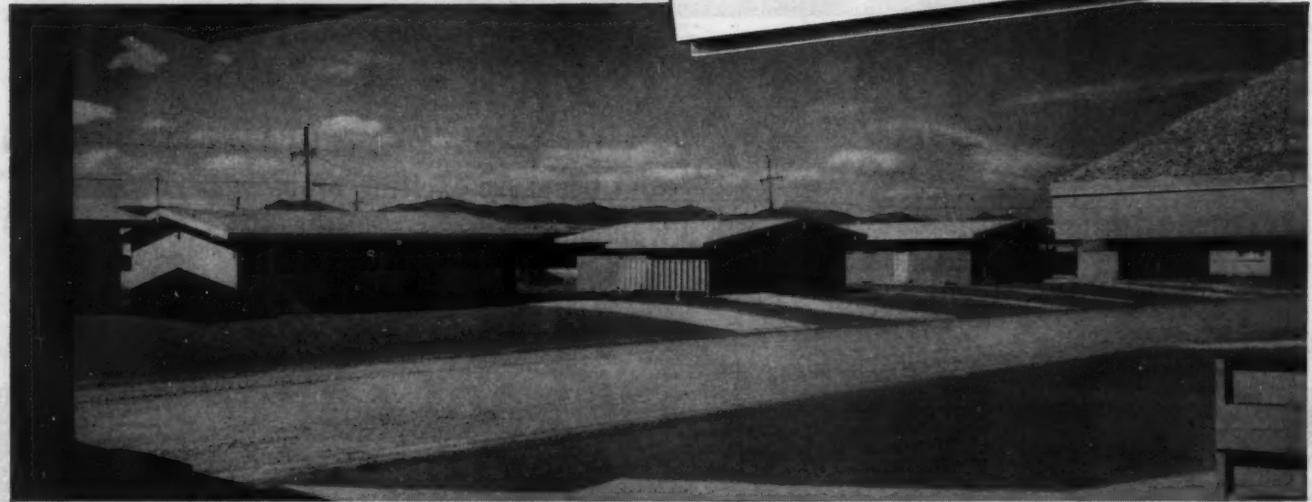
Lighter weight makes handling and installation easier. And there's a choice of five beautiful colors as well as white.

ALLIANCEWARE, INC. • Alliance, Ohio

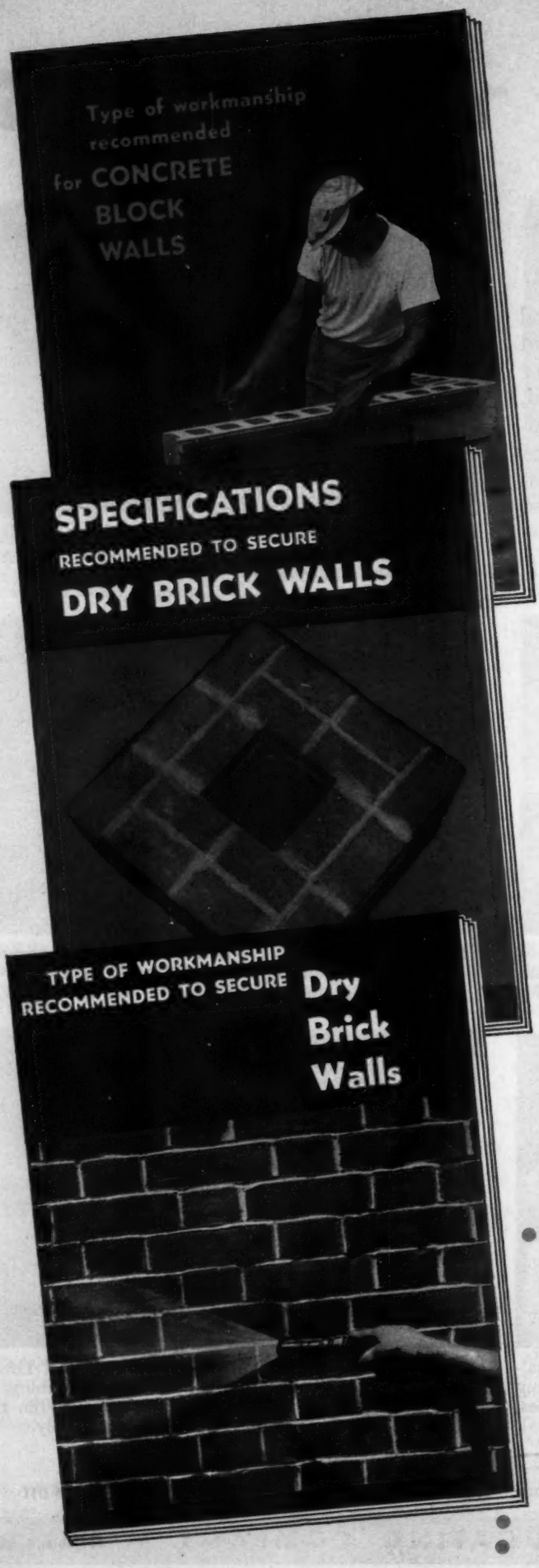
Plants in Alliance, Ohio and Colton, California

Bathtubs • Lavatories • Closets • Sinks

AllianceWare
PORCELAIN ON STEEL



Carey Holiday Homes—Denver, Colo.; *Architects:* Baume & Polivnick; *Builders:* Carey Construction Co.; *Plumbing Contractor:* Louis Cook Plumbing Co.; *Plumbing Wholesaler:* Ben Cook Supply Co. (Small illustration shows typical AllianceWare Sink Installation in Holiday Homes.)



GET THESE IMPORTANT BOOKS!

THE three books at the left are a "must" for anyone who is interested in good masonry construction. One describes the type of *workmanship* recommended to secure dry brick walls. The second describes the *specifications* recommended to secure dry brick walls. The third describes the type of workmanship recommended for *good concrete-block walls.*

Each of these books has been endorsed by foremost authorities. Each has received a citation of merit from the Producers' Council and the American Institute of Architects. Each is fully illustrated, clearly written. Each contains a wealth of really valuable information.

These books are *not* advertisements for our product, Brixment. They are published and made available to members of the building trades solely as an industry service. Mail the coupon, *today*, for your free copies.

LOUISVILLE CEMENT COMPANY, LOUISVILLE, KY.
Manufacturers of
BRIXMENT FOR MORTAR

Louisville Cement Company—Dept. 3
Second and Walnut Streets, Louisville 2, Kentucky

Gentlemen:

Without cost or obligation, please send me a copy of each of your three books on masonry construction.

Name_____

Firm_____

Street_____

City_____ State_____

YOU NAME IT... *Wheeling Metal L*

EVER since Wheeling Metal Lath was developed and used as a plaster base, builders, designers and architects have been discovering untold new uses for this versatile combination. Sometimes functional, sometimes decorative, yet always practical, and always economical, easy to erect and long lasting, Wheeling Metal Lath and plaster offer a virtual unending list of unique advantages and applications.



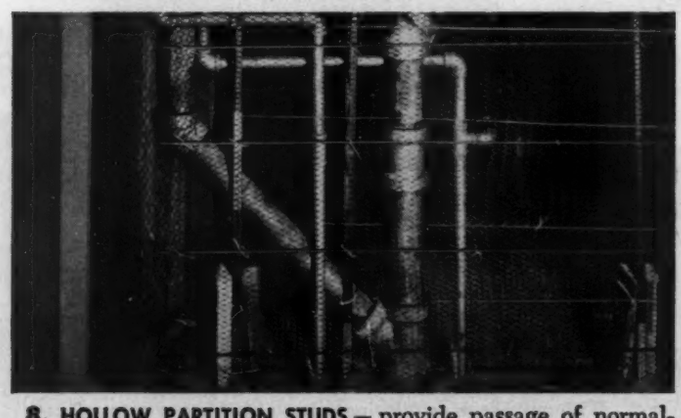
1. DOOR AND WINDOW CASINGS AND BEADS—requires only one installation to provide both screed and trim. Available with or without expanded flange in standard lengths; requires grounds.



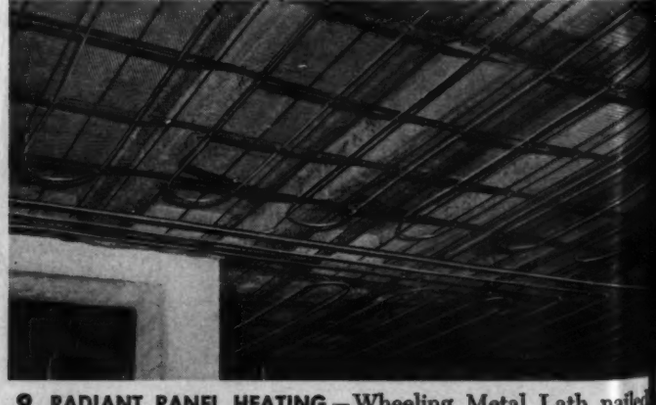
4. MEMBRANE FIREPROOFING—combines pleasing appearance with effective fireproofing. Wheeling Corner Bead, or Channels and Metal Lath provide an economical plaster base for crack-resistant, fire-resistant surface.



5. STUDLESS 2" SOLID PARTITIONS—durable, economical, fire and crack resistant. Shown here using Wheeling Bar-X-Lath Ceiling "L" Runner on ceiling and floor and ¾" Channel placed horizontally for temporary bracing.



8. HOLLOW PARTITION STUDS—provide passage of normal-size pipe and conduits, with no chases to cut. Wheeling Bar-Z System available complete with Studs, Track, Shoes, Tie Wire and Bar-X-Lath.



9. RADIANT PANEL HEATING—Wheeling Metal Lath nailed to wood joists, and in direct contact with the tubing, actually increases the heat transfer from the coils to the radiating ceiling surface, distributes the heat more evenly.

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT HOUSTON KANSAS CITY LOUISVILLE

WHEELING CORRUGATING COMPANY • BUILDING

Lath and Plaster CAN DO IT!



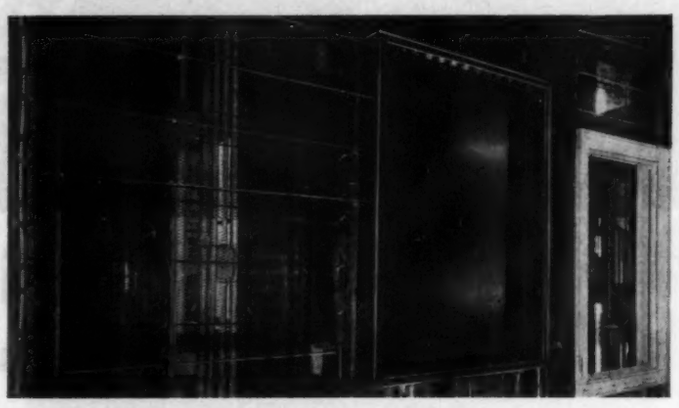
2. FLOOR AND CEILING REINFORCING—for light concrete floors laid over steel joists or junior beams and plastered contact ceilings, Wheeling Bar-X-Lath, with or without paper backing, provides a strong, reinforced slab.



3. SUSPENDED CEILINGS—permits complete design flexibility plus multiple practical applications. Wheeling Channels, Metal Lath and plaster can be shaped to meet the most complex conformations.



6. 2" SOLID PARTITIONS, METAL BASE SYSTEM—easiest, most economical solid plaster partition possible. Here, Wheeling Bantam Diamond Lath is attached to Channels with Wheeling Hank Tie Wire.



7. LOAD-BEARING WALLS AND PARTITIONS—an important feature wherever extreme strength, and resistance to impact, explosion and fire are desired. Consists of Wheeling Bar-X-Lath applied to any load bearing stud.



10. PACKAGING ECONOMY—Wheeling's "Engineered Metal Lath Package"—lifts of 500 sheets in 50 10-sheet bundles—increases storage space, saves handling, counting and identifying time. Provides flatter sheets with truer corners.

Wheeling

Metal Lath for Strength . . . Plaster for Beauty!

The complete line of Wheeling Building Materials includes Metal Lath and Accessories, Steelcrete Reinforcing Mesh, Steelcrete Bank Vault Reinforcing, Expanded Metal, ExM Gratings, ExM Angle Frame Partitions, Tri-Rib Steel Roof Deck, and SofTite Cop-R-Loy Galvanized Sheets.

MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

MATERIAL DIVISION • WHEELING, WEST VIRGINIA

For heating or ventilating new or existing offices, stores, schools or public buildings



Modine Cabinet Units—

so efficient, so versatile, so practical

NOTHING can match the performance, flexibility and economy of a Modine Cabinet Unit when it comes to heating, cooling and ventilating. It's the modern way to year 'round comfort yet costs less to install than a unit ventilator. Recessed in the wall or concealed behind a partition or false ceiling to conserve space, a Modine Cabinet Unit provides quick, positive, quiet distribution of warm or cool air for rooms, entrances and corridors of all sizes.

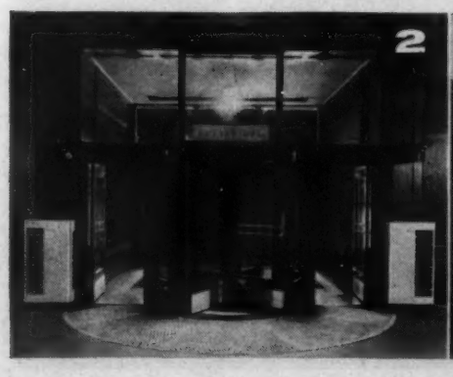
Choose from five models—120 to 640 Edr. Some heat with hot water, cool with chilled water . . . others use hot water or steam for heating only. Find out how one smartly-styled Modine Cabinet Unit can do the job of two or three old-fashioned, unsightly radiators—do it better for less. Call the Modine representative listed in your classified phone book or write for Bulletin 552—Modine Manufacturing Co., 1510 DeKoven Ave., Racine, Wis.

1. Impressive modern executive office uses completely concealed Type FT cabinet unit.
2. Entrance way of large department store has two Type FE cabinet units.
2. School hallway features recessed Type BT unit with plenum base.
4. Airport promenade utilizes Type BF cabinet units with plenum base.

Modine
CABINET UNITS



C-1281







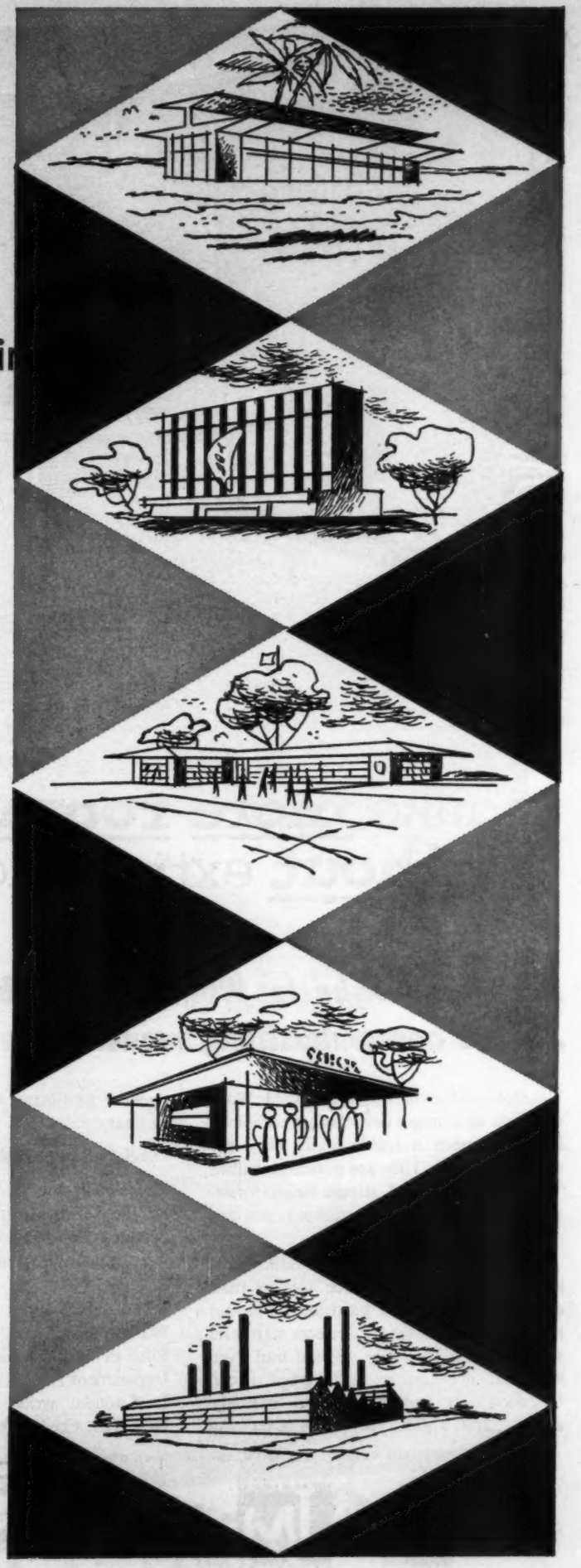
Avoncraft

Porcelain Enamel

a product to change the buildi
of the nation . . .

For commercial buildings such as service stations, auto laundries and motels, Avoncraft architectural porcelain enamel is the "new look" in construction materials. It's a building product of the future—here today! The gleaming and colorful porcelain surface is an eye-catcher—and extremely durable. Avoncraft porcelain enamel, with its ultra-modern look and maintenance-free features, is a material with which you can pioneer . . . hospitals, schools, freight stations and industrial and commercial applications of many kinds are ideally suited to porcelain enamel design. Consult our Avoncraft engineers for full details.

Write Today!



architect ducts

Avonda ays, Inc.

P. O. Box 1030 Orleans 8, U.S.A.



make **more room** **without** extra space...

J-M Class A Asbestos Walls are movable . . . save space and make space . . . are noncombustible, moderately priced . . . come in pleasing colors

New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

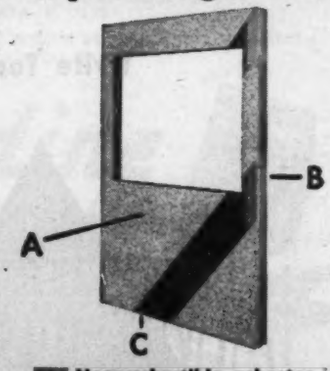
The finish of J-M Class A Movable Walls is a tough, hard film much thicker than on the usual movable partition. It is mar and scratch resistant . . . rejects stain and soil . . . can be easily washed and even scrubbed, if necessary. If damaged, it can be touched up inexpensively to look like new . . . and, unlike other types of factory-finished partitions, can be repainted with ordinary paint.

Undivided responsibility for a complete job

These flush or glazed partitions are erected by the Johns-Manville Construction Department complete with doors, door hardware, glass and trim.

• • •

For details about J-M Class A Asbestos Walls, consult your Sweet's Architectural File, or write Johns-Manville, Box 158, Department AR, New York 16, New York. In Canada, write 565 Lakeshore Road East, Port Credit, Ontario.



A Noncombustible asbestos-cement surfaces

B Generous reinforcing for added strength

C Noncombustible all-mineral insulating core

See "MEET THE PRESS" on NBC-TV, sponsored on alternate Sundays by Johns-Manville

JOHNS-MANVILLE JM PRODUCTS **Johns-Manville**

Installed in more schools and colleges than any other make of gym seat.....

ALABAMA
Birmingham Public Schools, Birmingham
Gadsden City Schools, Gadsden
State Teacher's College, Jacksonville
Marion Institute, Marion
University of Alabama

ARIZONA
Globe High School
Peoria High School
Phoenix Public

CALIFORNIA
Arvin High School
U. of Calif.
Long Beach City
Alhambra Union
Oakland Public
Point Loma High
San Fernando High
Abraham Lincoln

COLORADO
Rifle Union High School, Rifle
Union High School, Limon
Center Consolidated School, Center

CONNECTICUT
Southington High School, Southington
Windham High School, Willimantic

DELAWARE
Tower Hill School, Wilmington

DISTRICT OF COLUMBIA
Miller Jr. High School, Washington
Kramer Jr. High School, Washington

FLORIDA
Mainland High School, Daytona Beach
Lakeland High School, Lakeland
University of Florida, Gainesville
U.S.N. Air Station, Pensacola
St. Augustine Cty., St. Augustine

GEORGIA
Atlanta Public Schools, Atlanta
H.Q. Inf. Cen. Fld. House, Ft. Benning

IDAHO
N. Idaho Jr. College, Coeur D'Alene
Ind. School Dist. No. 118, Grace
High School, Montpelier
Idaho State College, Pocatello

ILLINOIS
St. Mary of Colle, Bergyn
South. Ill. Normal Univ., Carbondale
Lincoln High School, E. St. Louis
St. Anthony of Padua Church, Bo
Knox College, Galesburg
Thornton Twp. High School, Ha
Wheaton High School, Hine
Normal
Ottawa
Topek

KENTUCKY
Cole's Jr. High School, Ashland
Berea College, Berea
Centre College, Danville
Estill County High School, Irvine
Cavarga High School, Mt. Sterling

LOUISIANA
Baton Rouge Public Schools, Baton Rouge
Louisiana Polytechnic Institute, Ruston
Shreveport

MICHIGAN
Board of Education, Edina
Minneapolis Armory, Minneapolis
State Teacher's College, Moorhead
Cathedral High School, St. Cloud
Macalester College, St. Paul

MISSISSIPPI
U.S. Mer. Mar. Cadet Sch., Pass Christian
Pearl River Jr. College, Poplarville

MISSOURI
Brentwood High School, Brentwood
Southeast Mo. State Coll., Cape Girardeau
Wm. C. Bryant School, Kansas City
Bishop DuBourg High School, St. Louis
DeAndreis High School, St. Louis
St. Anthony High School, St. Louis
Washington University, St. Louis
Cent. State Teachers College, Warrensburg
Webster College, Webster Groves

MONTANA
Senior High School, Billings
School of Mines, Butte
High School, Co
School Inst
Carro

Akron Public Schools, Akron
Grandview High School, Columbus
Euclid St. High School, Cleveland
Hamilton Public Schools, Hamilton
Miami University, Oxford

OKLAHOMA
U. S. Army, Fort Sill, Lawton
University of Oklahoma, Norman
Watonga Public Schools, Watonga

OREGON
High School, Baker
State College, Corvallis
Jr. High School, Nyssa
Schools, Parkrose
& Lent Schools, Portland

PENNSYLVANIA
Spring Summerhill School, Connesutville
E. Stroudsburg High, E. Stroudsburg
State Teachers College, Mansfield
Loveley High School, Pittsburgh

SOUTH CAROLINA
Eau Claire High School, Columbia
Brewer High School, Greenwood
Y.M.C.A., Greenwood
Y.M.C.A., Rock Hill

SOUTH DAKOTA
South Dakota State College, Brookings
City Auditorium, Chamberlain

TENNESSEE
Dendridge High School, Dendridge
Bearden High School, Knoxville
Central High School, Murfreesboro
David Lipscomb College, Nashville
Franklin Co. High School, Winchester

TEXAS
Amarillo Jr. College, Amarillo
San Houston Jr. High School, Amarillo
Burkburnett High School, Burkburnett
W. B. Ray High School, Corpus Christi
Rice Institute, Houston
Kilgore Public Schools, Kilgore
Levelland High School, Levelland

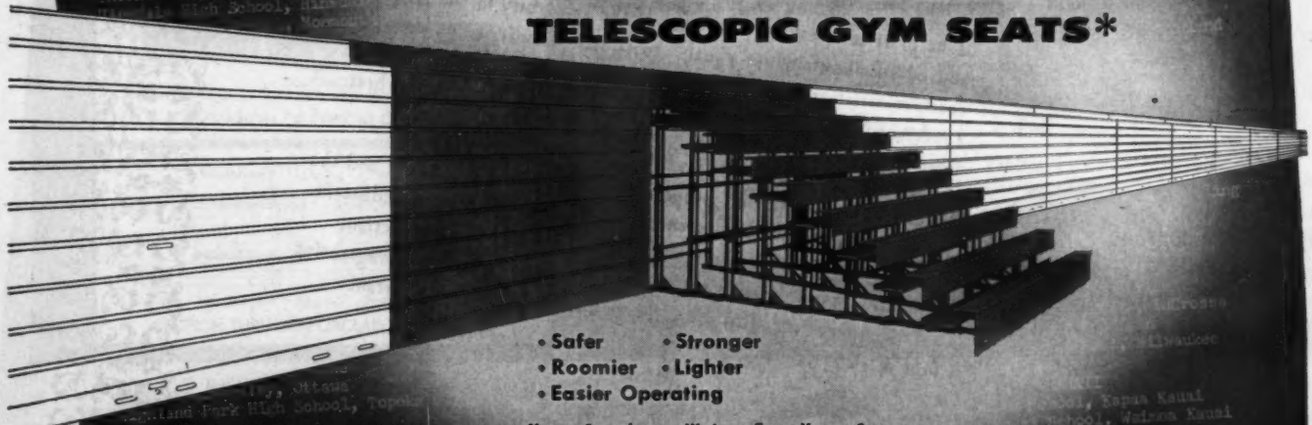
UTAH
Murray High School, Murray
Public Schools, Ogden
School, Roosevelt
School, Salt Lake City

Cresco
Milwaukee

Kapaa Kauai
School, Waimea Kauai

OHIO
Akron Public Schools, Akron
Grandview High School, Columbus

MEDART
TELESCOPIC GYM SEATS*



- Safer
- Stronger
- Roomier
- Lighter
- Easier Operating

New Catalog—Write For Your Copy

SPECIFY the best, then INSIST on it!

FRED MEDART PRODUCTS CO., INC.
3540 DeKalb St. • St. Louis 18, Mo.

Medart

SEE OUR CATALOG IN SWEET'S

*Medart Telescopic Gym Seats are fully protected by U.S. Patents

A salute to the National Electrical Contractors Association for their forward attitude expressed in the resolution "Honoring the Specifications"...

A resolution adopted unanimously by the National Electrical Contractors Association in Convention at New Orleans, Louisiana, October 30, 1954.

Honoring the specifications

Fidelity in carrying out the wishes of the customer and an eagerness to give the customer the benefit of the contractor's experience and knowledge in specialty application engineering is a hallmark of the qualified electrical contractor.

When the customer by his own request or by specification drawn by his architect or engineer designates a specific material or equipment, the electrical contractor has the obligation to quote on that material as specified. In the event he should include in his bid an alternate he should specifically describe the suggested substitute and list the alternate price.

In this manner the interest of the customer is well served and it would seem appropriate for architects and engineers not to reject bids with alternate proposals stated in this manner and that regulations and practices be adjusted to accommodate this more definitive bidding practice.

The practice of taking advantage of the ambiguity in the frequently abused specification, "or equal," to substitute inferior or less costly material or equipment is an unethical practice that should be condemned and rejected by the contractor as not being to the best interest of the public.

Good business practice, proper standards of ethical conduct and the public interest demand adherence to this simple, honest procedure in the conduct of this important part of the process of construction. It is a necessary foundation for the building of sound and progressive organizations needed to serve the public in the vitally important field of electrical contracting.

This advertisement is sponsored by Day-Brite Lighting, Inc., of St. Louis in the interests of clients of Architects and Engineers.

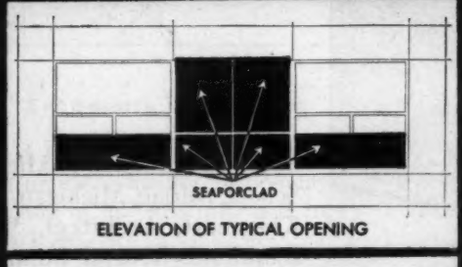
"DECIDEDLY BETTER"
DAY-BRITE
Lighting Fixtures

100% says WILLIAM B. TABLER
Architect for the Statler Hotels

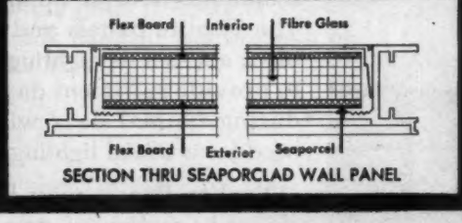


455 Room Hartford Statler Hotel
Corner of Pearl, Ford Streets
Hartford, Conn.
George A. Fuller, Contractor

A lamination of Seaporcel* porcelain with thermal and sound insulating core, the Seaporclad curtain wall panels for the Hilton Hotels' Statler in Hartford provide a complete exterior and interior wall . . . of sandwich construction . . . measuring only 1¾ inches in thickness.



ELEVATION OF TYPICAL OPENING



SECTION THRU SEAPORCLAD WALL PANEL

WILLIAM B. TABLER ARCHITECT
401 413 SEVENTH AVENUE NEW YORK 1, NEW YORK

May 26, 1955

Mr. B. B. Loring
Vice President
Seaporcel Metals, Inc.
28-20 Borden Avenue
Long Island City 1, New York

RE: Hotel Statler Hartford
Seaporcel Panels

Dear Mr. Loring:

With reference to your letter of May 24, 1955 inquiring about the performance of your panels on the Hotel Statler project, we are pleased to report 100% satisfaction. There has been no delamination of the panels and no leakage.

The building has now gone through one summer and one winter and stood the test of severe storms with no problems either in heating or cooling.

Since it has met every design performance, we wish to congratulate you and your company on a fine job well done.

Yours very truly

William B. Tabler

wbt/lb

William B. Tabler
Architect

Write for brochure #2-10

SEE OUR CATALOG IN SWEET'S

For some job somewhere you can use... **Seaporcel**
ARCHITECTURAL PORCELAIN

SEAPORCEL METALS, INC., 2800 Borden Avenue, Long Island City 1, New York
Member: Porcelain Enamel Institute · A. F. of L. Metal Fabricating & Enameling Plant
In Canada Seaporcel is Manufactured by General Steel Wares, Ltd., London & Toronto, Ontario
Complete erection and engineering departments

*Reg. U. S. Pat. Off.

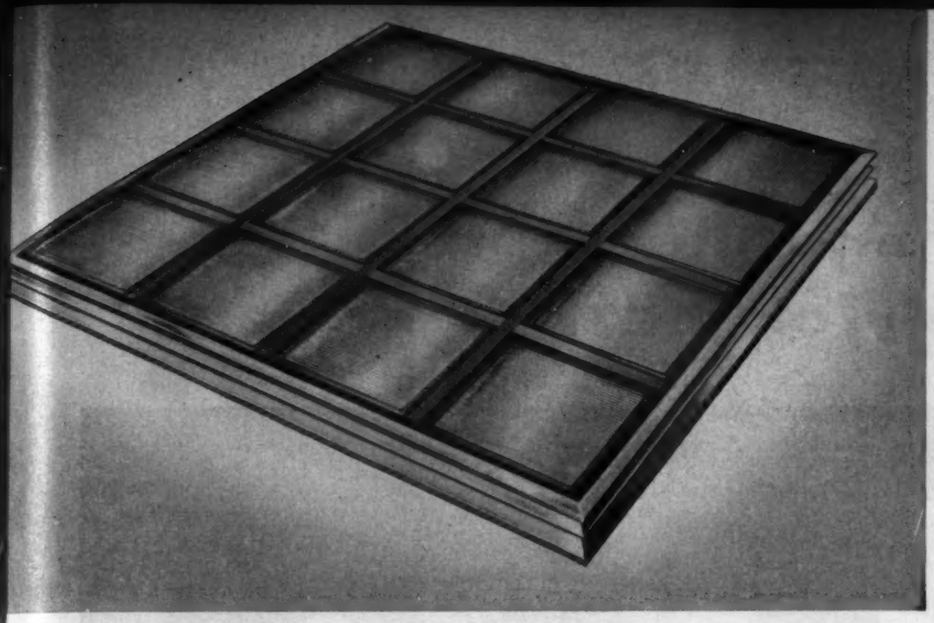
TESTED AND PROVED

Glass Panels bring cool daylight in through the roof...



Toplite installation at Michener School, Adrian, Michigan. Louis Kingscott, Architect. W. N. Bjorklund, General Contractor. The Toplite panels and glass block act as a daylighting team to provide sufficient daylight during normal days without need for artificial lighting.

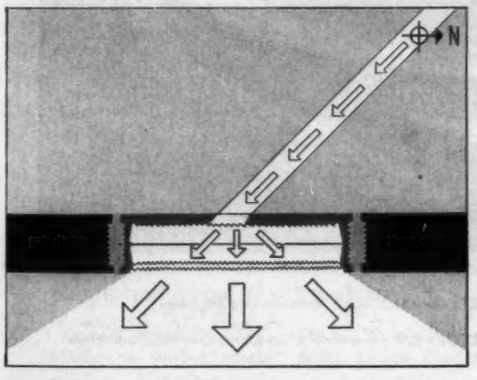
Toplite Panels may be installed in continuous strip, pattern, or in individual panels. Use a Toplite Panel as you do a lighting fixture. They permit daylighting of all building areas regardless of location or distance from exterior walls.



Toplite Roof Panels are factory-fabricated ...ready to install

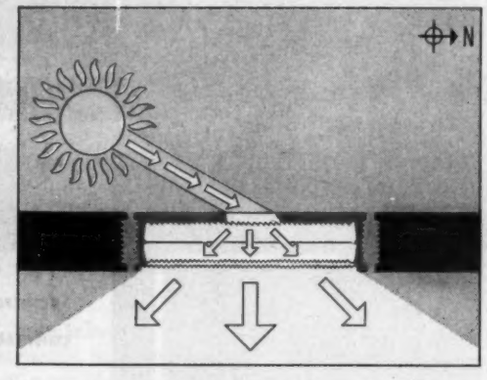
They are shipped in individual crates marked to show correct orientation and directional positioning; for speed and ease in installation. Panels arrive on job site ready to install. They are set on prepared curbs and anchored ready for flashing by the roofer.

Why Owens-Illinois TOPLITE meets the demand for good daylighting



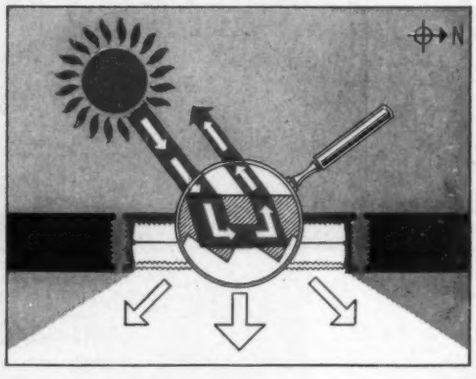
Transmits north light

Maximum transmission of north light is a desirable quality in toplighting because of its uniformity and freedom from glare and solar heat. Note how the prism structure of Toplite affords efficient transmission of north light.



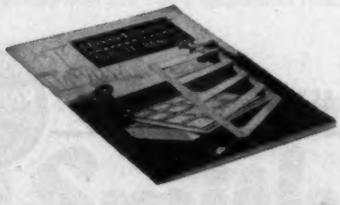
Accepts winter sun

Since low winter sun is comparatively weak in relation to high summer sun as far as glare and solar heat are concerned, maximum transmission is again desirable. This illustration shows how Toplite accepts and transmits winter sunlight.



Rejects summer sun

Other materials which transmit north light and low winter sun also transmit high percentages of light during the hot, summer months. Toplite rejects direct light and heat from hot, summer sun, but transmits much of the cool, north light.



Write for free booklet on Toplite Roof Panels

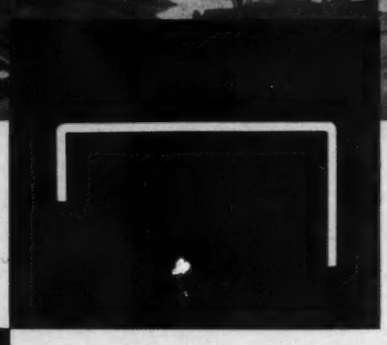
The complete story of this great new advance in efficient utilization of free daylight is available in this new bulletin. For your free copy write today: Kimble Glass Company, subsidiary of Owens-Illinois, Dept. AR-9, Toledo 1, Ohio.

TOPLITE ROOF PANELS
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

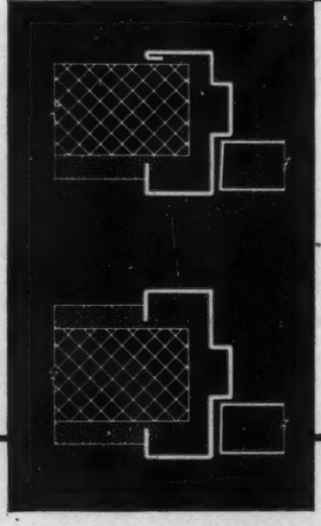
The biggest and the best rely on AETNA!





ARCHITECT: George L. Dahl, Architects and Engineers

CONTRACTOR: R. P. Farnsworth & Company, General Contractors



Designed as a Convention Center, the mammoth Dallas Memorial Auditorium, now under construction, will seat 10,000 persons without a single supporting column to obstruct the view. This unique design is dependent upon modern construction methods and the best of materials. Aetna Steel Doors and Door Frames are being used throughout.

Be sure to specify . . . **AETNA** *and* **BONDERITE**

PROTECTED BY Bonderite QUALITY CORROSION RESISTANT

*Pat. Pending †Trade Mark
††Licensed under DuPont Patent

AETNA STEEL PRODUCTS CORPORATION

730 Fifth Avenue, New York 19, N. Y.

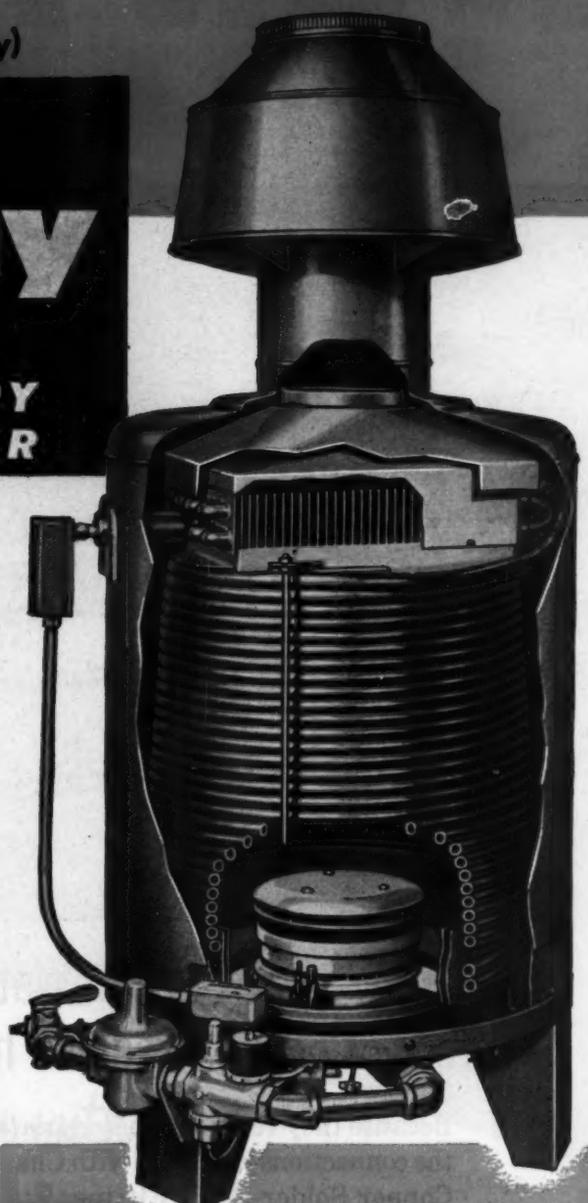
AETNA ALSO PRODUCES
The new Arnot PARTITION-ettes*†, modular office furniture, desks and OFFICE-ettes††. Elevator enclosures, convector enclosures. Hollow metal doors and frames. Marine joiner work and bulkheading (aluminum and steel). Ships' interior outfitters.

NEW WATER HEATER FOR THE BIG JOBS!

(Something New in Burkay)

A.O.Smith Burkay "718"

HIGH RECOVERY WATER HEATER



Now in one compact package—the gas-fired water heater of the Industry—the New A. O. Smith Burkay "718": 403 gallons per hour at 100-degree temperature rise, 420,000 BTU per hour—twice the size of former models! Here is a *big* heater for your big jobs. It opens the door to many new applications for commercial water heating. A real opportunity for you to include this outstanding water heater in your new commercial and industrial building designs. The "718" is another quality product of A. O. Smith research . . . fully guaranteed. It is ideal for large restaurants, laundries, apartment buildings, swimming pools, industrial plants, and a host of other places.

The Burkay "718" has a lot to offer, unmatched in the trade—a water heater with twice the capacity of former models, thereby reducing the expense of multiple heater connections; especially designed as a straight Recovery Heater and for the patented A. O. Smith Booster-Recovery Two-Temperature System. It incorporates in its design the time-tested, exclusive, plus features found in other A. O. Smith Burkay heaters—copper construction for clean, rust-free hot water; sturdily designed for long, service-free life; patented burner, and the special heat exchanger for remarkable operating economy and instant heat response to hot water demands.

It will pay you to see this outstanding new addition at your A. O. Smith distributor or write for full details.

"Plenty of Hot Water Pays All Ways"

Investigate, today, the many advantages of the "Gas Way" to heat water more quickly with this clean, economical fuel!

Through research ...*a better way*

A.O.Smith

CORPORATION

PERMAGLAS DIVISION • KANKAKEE, ILLINOIS

WRITE, TODAY, FOR FULL DETAILS

about the new

A. O. Smith Burkay "718" Water Heater

A. O. SMITH CORPORATION
Permaglas Division, Kankakee, Illinois, ARCH R, 9-55

Gentlemen: Please send me, today, full details on the "718."

Name.....Title.....

Company.....

Address.....

City.....Zone....State.....

WON'T LEAK!



Joints of Chase® Copper Water Tube and Chase® Solder-Joint Fittings mean a radiant heating job that lasts longer!

Because they're strong *solder joints*, the connections you make with Chase Copper Solder-Joint Fittings stay leak-proof *for good!*

And because Chase Copper Water Tube comes in long lengths of 60 to 100 feet, *fewer* fittings are required, installation is faster and easier!

Together, Chase Copper Water Tube and Chase Solder-Joint Fittings mean a *quality* radiant heating installation that will protect your reputation for years! On your next job, specify Chase!

Chase®

BRASS & COPPER CO.

WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION

The Nation's Headquarters for Brass & Copper (†sales office only)

Albany†	Chicago	Detroit	Los Angeles	New Orleans	Rochester†
Atlanta	Cincinnati	Grand Rapids†	Louisville†	New York	St. Louis
Baltimore	Cleveland	Houston	Milwaukee	Philadelphia	San Francisco
Boston	Dallas	Indianapolis	Minneapolis	Pittsburgh	Seattle
Charlotte†	Denver	Kansas City, Mo.	Newark	Providence	Waterbury

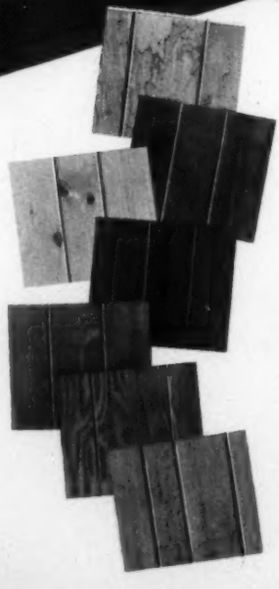
How to win commercial jobs and influence home buyers



Beautiful business with Walnut Craftwall — Style 400

Gracious living with Oak Craftwall — Style 300

Plan with Craftwall



FACTORY FINISHED PANELING by Roddiscraft

Beauty that captivates all kinds of customers — luxury and distinction that never fade—all yours with Craftwall . . . the hardwood plywood paneling that is completely finished at the factory. Nature's beauty sealed in!

So practical, too! You can hold down completion costs — step up property values — with wonderfully functional, maintenance-free Craftwall paneling. A wide selection for both contemporary and traditional decors.

And that's just the beginning! You get unlimited design opportunity with three styles, nine handsome craft-finished woods—*Cherry, Mahogany, Oak, Birch, Knotty Pine, Elm, Walnut, Maple and Blonde Limba.*

Turn the page for more great news →

RODDIS PLYWOOD CORP., Marshfield, Wis.

More profitable facts about Craftwall

FACTORY FINISHED PANELING



FACTORY CRAFT-FINISH

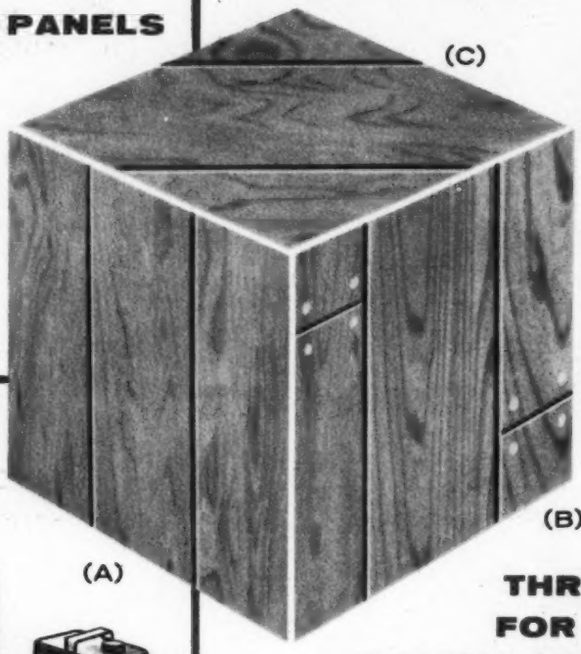
It stays crystal-clear and gleaming bright over the years . . . resists dirt, grease, ink and ordinary chemicals. It won't craze, chip or crack. *Best-of-all, it wipes clean in seconds* . . . ends forever the cost and bother of redecorating.

Remember, too, factory craft-finish pays off in installation, too. There's no fuss or mess with on-the-job finishing.



EASY INSTALLATION WITH LARGE, LIGHTWEIGHT PANELS

They go up fast . . . and at low cost, too! Available in three sizes: 48" x 96" and 16" x 96" as well as 32" x 64". All panels are ¼" thick.



(A)

Style 100
V-grooved only

(B)

Style 300
V-grooved, cross-scored and pegged

(C)

Style 400
matching V-grooves for horizontal installation

THREE STYLES FOR LIMITLESS DESIGN OPPORTUNITY

The nine beautiful Craftwall woods are all available in the provocative styles shown here. These are styles that just naturally inspire creative architects and builders — styles that truly satisfy customers, too.

EVERYTHING YOU NEED FOR THE COMPLETE JOB

Roddiscraft offers you a full-job package for every Craftwall installation. You have a selection of hardwood molding and trim — in both contemporary and traditional styles — specifically designed to go with Craftwall paneling. And to match trim with the Craftwall factory-finished paneling, we offer new Roddiscraft wood finishes in all nine handsome Craftwall wood hues.





NATIONAL ADVERTISING PRE-CONDITIONS YOUR CLIENTS

Full-color advertisements in America's best-read publications sell the idea of Craftwall paneling to your clients and customers. When you say, "It's Craftwall," they know they're getting the best in wood paneling.

Roddiscraft

MAIL THIS COUPON FOR ALL THE FACTS ABOUT RODDISCRAFT BUILDING PRODUCTS

RODDIS PLYWOOD CORPORATION
Dept. AI55, Marshfield, Wisconsin

Tell me more about Craftwall factory finished paneling and other Roddiscraft decorative products for home and business.

Name .....

Firm Name .....

Address .....

City ..... Zone ..... State .....

for originality in building...

another SCHLAGE MASTERPIECE

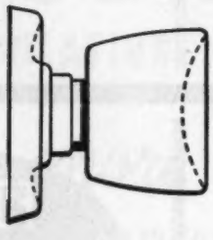


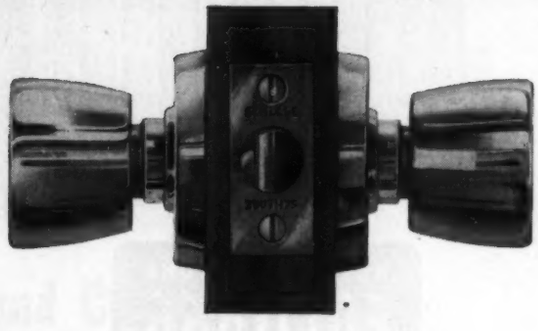
TULIP design

In recognition of today's emphasis on building quality and distinctive design, Schlage offers the new Tulip lock. Its unusually handsome lines feature a concave face and generous hand-pleasing grip. The Tulip is so designed to give doors greater originality, buildings greater sales appeal. Now available for both residential and commercial installations in wrought brass, bronze or aluminum with all standard finishes and lock functions.

The Tulip lock is one of 5 new designs recently introduced by Schlage as further evidence of their modern lock leadership. These new additions now make possible an even wider selection of fine Schlage lock designs in many beautiful finishes to suit every building requirement.

Tulip Adds Distinction to Residential and Commercial Doors





The Tulip design lends a luxurious touch to all buildings... reflecting quality wherever it is installed. Combined with Schlage escutcheons or as a design by itself, it is an appealing asset for door decor.

As a lock mechanism, the Tulip offers a supreme standard of operating ease and locking efficiency. For with Schlage's name on the latchplate, you assure your customers quality and security for the life of the door.

SCHLAGE

SCHLAGE LOCK COMPANY • SAN FRANCISCO • NEW YORK • VANCOUVER, B.C.
Address all correspondence to Schlage Lock Company, San Francisco



GREAT NEWS!

now you can specify

folding doors for every need

from one complete line

of recognized quality

HOLCOMB & HOKE
FOLDOOR
THE SMARTEST THING IN DOORS

Only fabric-covered door with "Multi-V" construction for lifetime ease of operation—without "air bellows." Types and sizes to solve every space problem—large or small. Motor-driven or manual, providing maximum space-saving flexibility in any design. Widest choice of colors and vinyl-fabric textures. Track always concealed—with or without cornice. See Sweet's File or your FOLDOOR distributor for details.

FOLDOOR *Beautyline* **NEW**

First in the moderate-cost field with:Truss-embossed hinges top and bottom; rigid "Multi-V" construction assures pantograph action throughout. Cornice, nylon trolley wheels, metal hardware, textured vinyl fabric. Specify for homes, institutions, hotels, apartments, schools, industrial or commercial projects. Eleven sizes: five widths, 2′-0″ to 4′-0″; three heights, 6′6″, 6′8½″ and 8′0″. See distributor or write.

HOLCOMB & HOKE
Fol-Bak
FOLDING DOOR

Quality leader in the economy field. Approved and favored by leading home builders. Three widths, 2′8″, 3′0″, 4′0″, and two heights, 6′6″, 6′8½″. Vinyl fabric in three decorator colors. See your FOLDOOR-FOL-BAK distributor.

Holcomb & Hoke Manufacturing Co., Inc.
1545 Van Buren Street, Indianapolis, Indiana • In CANADA: FOLDOOR of Canada, Montreal 26, Quebec

INSTALLING DISTRIBUTORS IN ALL PRINCIPAL CITIES

"K" Factor 0.21

Zero Moisture Pick-Up

No Vapor Barrier Needed

Light Weight — 4.5 p. c. f.

Average Compressive Strength—60 p. s. i.





1980 pieces 17-½" x 35-½" x 1-½" of Rubatex were used to insulate the ceiling of Armour Pork Cutting Room. Rubatex was applied to a wood ceiling in a brick building, placed between the joists and held to ceiling by "Miracle" (Type R-2) adhesive.

G. A. I. RUBATEX
INSULATION HARDBOARD

makes more cents *

as ceiling insulation at ARMOUR and Company Plant

Rubatex Insulation Hardboard R-103-S was used to insulate the ceiling of the Pork Cutting Room at Armour and Company's East St. Louis, Illinois plant. Average temperature maintained in the room is 50 degrees.

* Pork Cutting Room is cleaned daily with hot water then cooled with a cold air blast in readiness for next day's operation. Because of moisture resisting qualities and the finished surface for ceiling application, Rubatex was selected to withstand the exceptionally high humidity conditions.

Write us about your low temperature insulation application. Let us show you how Rubatex Insulation Hardboard can make more cents for you — more cents in performance — more cents in production and power savings.

PIONEER MANUFACTURER OF CLOSED CELLULAR RUBBER

GENERAL AMERICAN INDUSTRIES, INC.
RUBATEX DIVISION



WHICH HOUSE

☐ THE ONE ON THE LEFT

☐ THE ONE ON THE RIGHT

Note the 3-wire feed-in on the right-hand house. There's your clue!

All other things equal, *this* is the home to buy. With its 100-ampere service entrance, it can have all the facilities for modern electrical living: Wires large enough to carry power plus . . . plenty of outlets to handle the many electrical appliances in use today, as well as provisions for *more* appliances in the future!



WOULD YOU BUY?

Such a home, thanks to wise planning, will far outlive its left-hand twin in usefulness, value and marketability. It is a home that's easier to live in, *easier to sell!*

More than ever before, the buyer of homes looks today for quality in every detail. He knows he is living an electrical life, seeks a home that will fill all his electrical needs both today *and* tomorrow. You can give him such a home – and add to your reputation as well – by planning with an accent on sound, *adequate* wiring!

Free Home Wiring Wall Chart! Send today for Kennecott's handy wall chart showing typical home circuit loads. Use it as a check list when planning home electrical systems. For your copy, write Kennecott Copper Corporation, Department A-95, 161 East 42nd Street, New York 17, New York.

Kennecott Copper Corporation

Fabricating Subsidiaries: CHASE BRASS & COPPER CO. • KENNECOTT WIRE & CABLE CO.



Get full 28 Day Curing for Greater Density with CEM-SEAL

Unless properly sealed, a new concrete floor has a natural tendency to deposit alkaline salts on the surface as it cures. This causes surface powdering. called "dusting" or "bloom."

CEM-SEAL acts as a cap or dam to hold moisture down below the surface. This prevents formation of the damaging salts — and it also prolongs the curing period of the concrete. The surface comes through denser, harder, more resistant to wear.

Application is simple and easy. Treat acres of floor in a short time with big sheepskin applicators. Floors can be opened to traffic in just 4 hours.

CEM-SEAL is also an ideal primer for renewing old concrete floors.

Check these CEM-SEAL advantages — never before available.

1. **Goes on easy — just sweep floor and apply.**
2. **1-coat quick dry application — seals moisture in the concrete.**
3. **Complete curing of concrete gives you a dense, uniform surface with longer life.**
4. **Protects floor from stains while other building trades are at work.**
5. **Prevents "dusting" and efflorescence.**
6. **Gives you a smoother surface for easy maintenance.**

HILLYARD CHEMICAL CO.
St. Joseph, Mo.
Please send me full information about Hillyard CEM-SEAL.

.....for new concrete

.....for renewing old concrete

Name .....

Address .....

City ..... State .....

Mail This Coupon Today

Hillyard Maintaineers®, trained floor experts, are stationed in principal cities. There is one near you, who will be glad to consult with you on your problem of treatment or maintenance of any type floor No charge, no obligation for this service.



FLOOR HILLYARD TREATMENTS

ST. JOSEPH, MISSOURI
San Jose, Calif. Passaic, N. J.
Branches in Principal Cities

This 10-minute demonstration will prove it...

The New QO is the Finest Breaker Ever Built!



In announcing Square D's new NQO circuit breaker lighting panelboard line, we made this statement—"*this panelboard offers you the finest breaker ever built.*"

Ever since we made that statement, Square D Field Engineers throughout the country have been *proving* it by means of the very concise and conclusive demonstration pictured above.

If you haven't seen this demonstration, your Square D Field Engineer will be glad to set up a time to meet your convenience. We're sure you'll find it ten minutes well invested.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

BARBER COLMAN

uni-flo Engineered Air Distribution

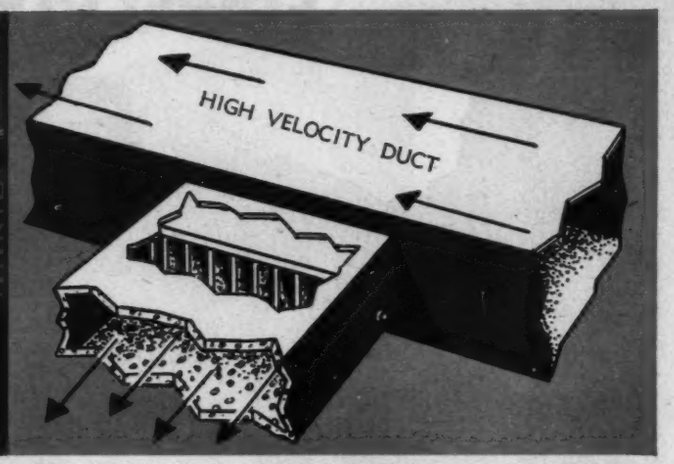
How high velocity air valves solve space and cost problems

Several problems faced engineers planning a year-round, high velocity air conditioning system in this Morrison, Illinois, building after it was purchased by General Electric Company. The air conditioning system with all ten zone reheat coils had to be installed in a small equipment room. Ducts had to be located over existing suspended ceilings, without interfering with piping already in place. Efficient distribution at low noise level was the final objective—at a price within budget requirements. A trip to the Barber-Colman Laboratory convinced system designers that Uni-Flo Air Valves can be used at branch duct take-offs to deliver low velocity air to branches from high velocity trunk ducts. With all diffusers on each branch served by one air valve, and using a minimum of sound attenuation material, costs were reduced to meet budget figures.

Project Engineers—BOOTH BROTHERS AND COMPANY



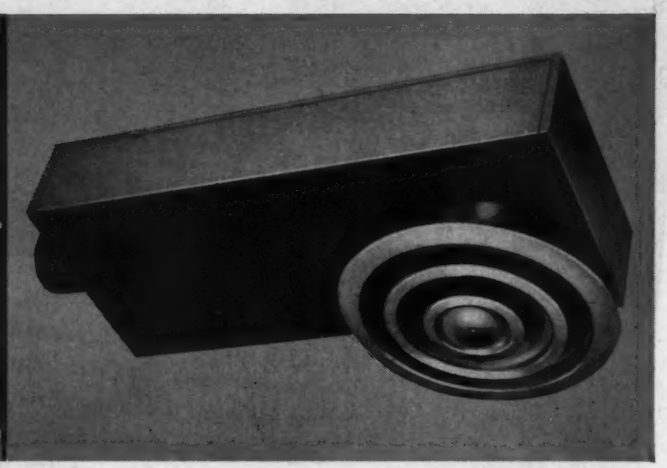
Two-story office building in Morrison, Illinois, acquired by General Electric Company. Space and cost problems arising from year-round air conditioning of an existing building were solved with a modern high velocity air distribution system, using Uni-Flo Air Valves.



Fewer Air Valves Are Required, Reducing Costs, because one Uni-Flo High Velocity Air Valve can be installed at a low velocity branch duct take-off from a high velocity trunk duct to serve several diffusers. This is a pioneer advantage of the Uni-Flo design.



Venturi-Flo Ceiling Diffusers harmonize with modern office decor, contribute efficient distribution of the conditioned air, free from drafts and disturbing noise. Each diffuser is individually adjustable for simplified balancing of the system. Pleasing results testify to sound engineering of the system.



A Uni-Flo High Velocity Control Unit is combined with a Venturi-Flo Ceiling Diffuser and made available as a "package" ready to attach in locations where it is desirable or necessary to continue high velocity to an individual diffuser.

BLAZING THE TRAIL TO BETTER AIR DISTRIBUTION



First with comprehensive, reliable, high velocity data

When Barber-Colman introduced the Uni-Flo Air Valve, results of laboratory tests on high velocity performance were released to the air conditioning industry. That reliable data enabled system designers to proceed with a greater number of satisfactory applications. Comprehensive performance data and design information for engineers are available in bulletin F-6598. You may obtain your copy by calling our nearby Field Office, or by writing us.

Barber-Colman Company

Dept. U, 1104 Rock Street, ROCKFORD, ILLINOIS, U. S. A.

Field Offices in principal cities

Air Distribution Products • Automatic Controls • Small Motors
Industrial Instruments • Aircraft Controls • Overdoors and Operators
Molded Products • Metal Cutting Tools • Textile Machinery

There are good reasons why...





. . . the SANS SOUCI selected

GENERAL PLYWOOD Doors for both interior and exterior use

It's not surprising that the Sans Souci, one of Miami Beach's most spectacular luxury hotels, selected General Plywood flush doors to enhance the beauty of the decor for which it is famous. General doors come in a wide variety of grain patterns of both domestic and foreign woods enabling the architect to achieve striking and imaginative effects.

Not surprising either was the selection of General exterior doors for the Cabana Club area. Here the builders faced a situation where wood doors had to stand up under the most extreme climatic conditions brought about by sun, wind and moisture. In this installation General Plywood's engineered seven-ply construction has justified the confidence of the builders in every respect.

Specify General on your next job and be sure!



COLUMN CORE CONSTRUCTION
Cylindrical fibre columns—strongest lightweight structural form known—are used to insure combined *lightness and strength.*

TWO LOCK BLOCKS
Wide lock blocks on both sides provide *ample space for lockset*—eliminates possibility of *hanging error.*

3-PLY BALANCED PANELS
Center ply thickness is balanced with the combined thickness of two outer plies, assuring *utmost rigidity and resistance to warping.*

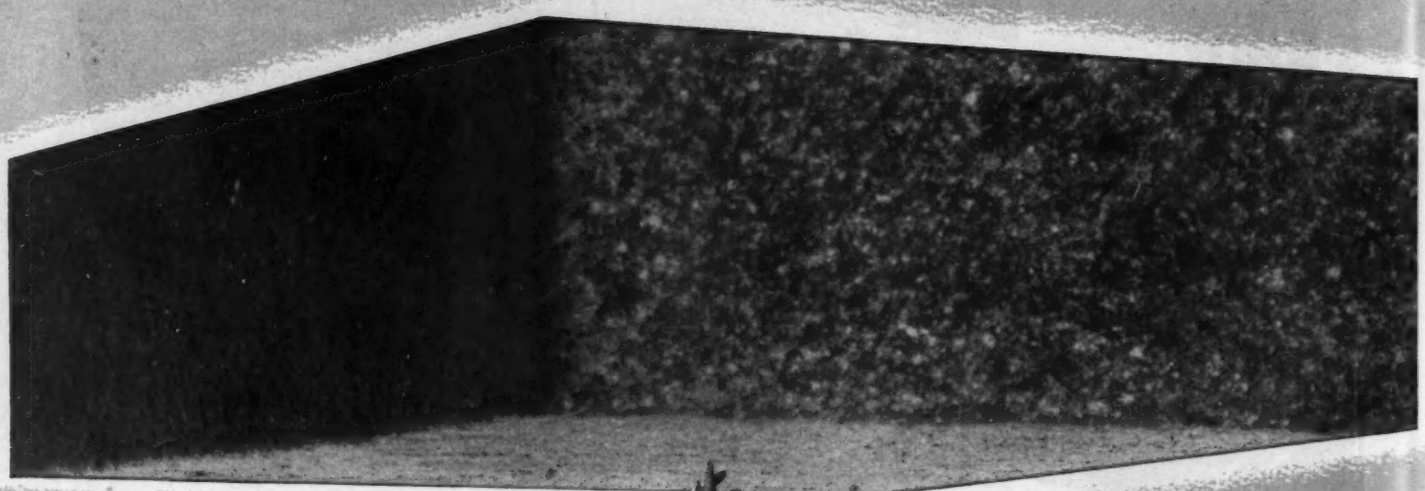
GREATER BEAUTY
The smooth, hard, cabinet-maker's finish is produced by an extra sanding operation on huge belt sanders. *Faster and finer finishing on the job.*

OVER 50 YEARS

IN HARDWOOD PLYWOOD

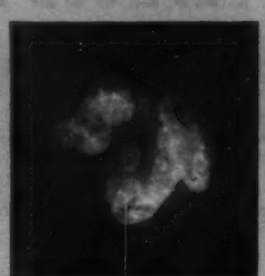
GENERAL PLYWOOD
CORPORATION
LOUISVILLE, KENTUCKY

From the nation's newest, fully-automate



it's light as in Perlite

(From Which it is Made)



ABOVE. Photomicrograph (microscopic X-ray) of a granule of expanded perlite shows how expansion under 1700°F temperature hermetically seals the air cells (lighter areas), creating ideal insulation. Granule shown was photographed with sodium light.



fesco® BOARD

F. E. SCHUNDLER & COMPANY, INC. 504 Railroad S

te plant comes . . .



At right — The ultra-modern, fully automated plant of F. E. Schundler & Co., Inc., Joliet, Illinois. This plant was engineered especially for the production of Fesco Board — the all-new board designed exclusively for roof-deck insulation.

FESCO

ROOF DECK INSULATION

BOARD

Hermetically Sealed, Incombustible, Rigid, Permanent

CHECK THESE OUTSTANDING FESCO BOARD FEATURES:

FIREPROOF — Reliable, authenticated laboratory tests show Fesco Board to have a flame spread factor of only 20.5, and smoke contribution factor of 0.

PERMANENT — Expanded Coralux perlite the principal ingredient of Fesco Board, is dielectric, chemically inert and non-absorbtive. As a result, Fesco Board will not rot, mildew, deteriorate. Mineral composition will not support organic life of any type.

STRUCTURALLY STRONG — Independent laboratory testing has proved Fesco Board to be compressible, yet essentially stable. In actual compression tests, a 1-inch section of Fesco Board withstood 140-lbs. p.s.i. and to prove its inherent strength withstood 55-lbs. p.s.i. of transverse pressure.

INSULATING VALUE — Fesco Board has a K-factor of .285 @ 0°F., and .295 to .31 @ 75°F.

LIGHTWEIGHT — Easy-to-handle board units measure 1" x 24" x 48" or 1" x 24" x 36" and weigh approximately .66 lbs. per square foot — about one half the weight of most existing insulation boards.

MOISTURE RESISTANCE TEST DATA: Fesco Board has no capillary or wick-like attraction for moisture as do fibrous materials. Moisture resistance tests by a nationally known laboratory read as follows:

Material	Density Lbs/Cu/Ft	Thickness Inches	% Absorption By Volume 2 Hour	24 Hour
Fesco	8.3	1	0.5	1.4

From 0 to 100% relative humidity, expansion of Fesco Board is less than ¼ of 1%.

SPECIALLY DESIGNED FOR MASONRY, STEEL AND WOODEN ROOF-DECKS

Here, for the first time is a board that combines every desirable feature of a roof-deck insulation in one product—designed specifically for the purpose.

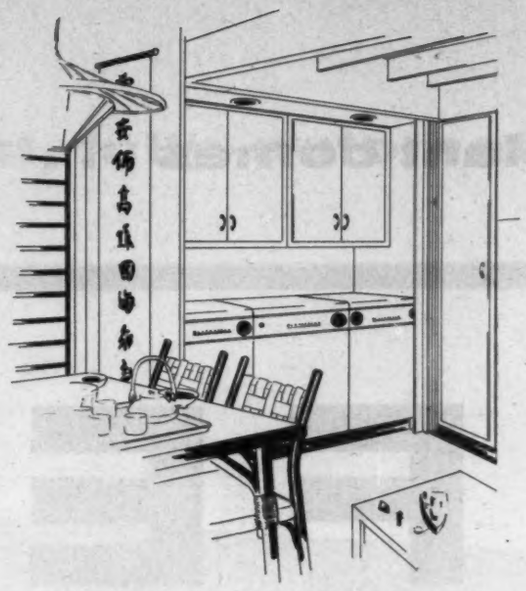
Fesco Board consists of a homogeneous mass of expanded Coralux perlite particles, mineral binders and fibers. These materials are processed to form an easy-to-handle board unit that is dimensionally stable and easy to cut. It was developed to answer the demands of builders for a lightweight, moisture resistant, non-combustible roof-deck insulation that would resist the ravages of time, fire and the elements.

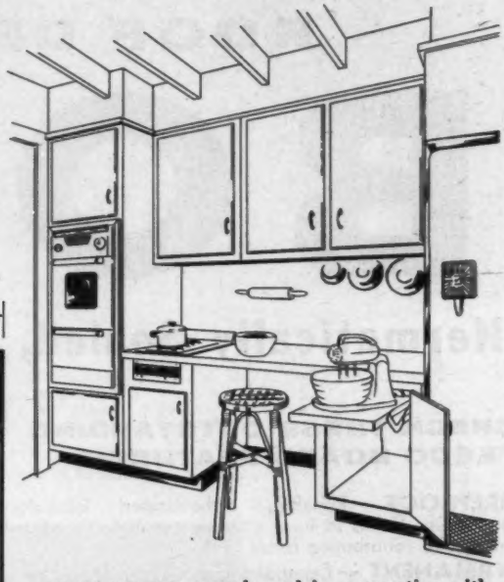
Coralux perlite, the major ingredient of Fesco Board, is expanded and annealed at temperatures of 1700°F to form HERMETICALLY SEALED beads which contain scores of air-cells, compartmented and reinforced by membranes of glass. The entrained air in this multi-cellular structure makes perlite the perfect permanent insulator. Expanded Coralux has long been used in fire-proof plaster and concrete, and has been assigned fire-ratings of up to 4 hours. Having been pre-fused at such high temperatures, expanded Coralux perlite is incapable of burning.

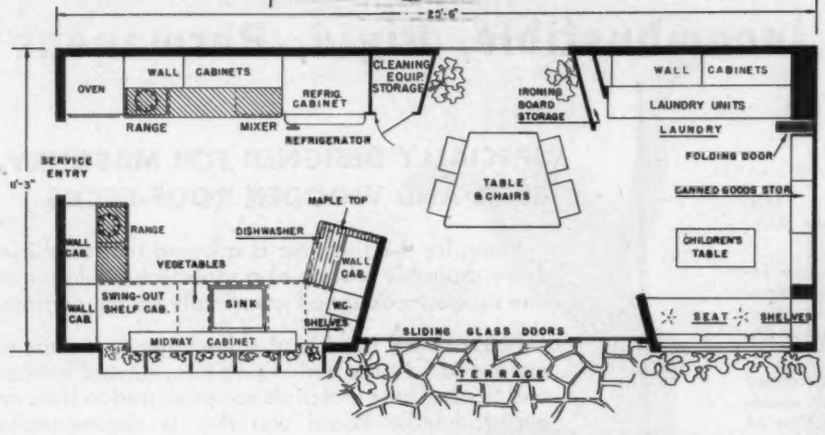
Write today for samples and technical data on all-new Fesco Board.

nd St Joliet, Illinois Manufacturers of CORALUX PERLITE PRODUCTS & VERMICULITE PRODUCTS









THIS KITCHEN was planned in cooperation with McCall's magazine. It features functional operation with an Oriental motif. A full color reprint is available from your Mutschler representative, if you'd like to see how it looked when completed.

Mutschler helps design "Showplace Kitchens" for any home

CONSULT SWEET'S ARCHITECTURAL FILE

for specifications of Mutschler's complete line of maple cabinetwork for kitchens . . . 23b/Mut.

If you are planning a school, also see Sweet's Architectural File, 22d/Mu, for homemaking, arts and crafts, and general storage cabinetwork.

The style and decor of kitchens is a business we've been in since 1893. And our finest quality maple cabinetwork line is complete . . . including units for *all* built-in appliances of *any* manufacturer, and dozens of unique special purpose features.

Finishes are satin enamel or Du Pont "Dulux" . . . natural, driftwood and a variety of decorator colors.

Because Mutschler specializes in complete kitchens, our sales representatives are trained personnel who can join with your staff in solving difficult kitchen problems. These services cost nothing extra when you specify a "Showplace Kitchen" by Mutschler.

Write or wire collect for name of your nearest representative.

MUTSCHLER BROTHERS COMPANY
Dept. 9115, Nappanee, Indiana



PLUS in beauty...

MINUS in maintenance

BEDFORD*

another distinctive pattern in
TEXTURED
E-L-A-S-T-I-C FABRIC BACK

Masland Duran®

PLASTIC UPHOLSTERY





Here is all of the elegance of rich texture re-created on Masland Duran, the finest and most practical in plastic upholstery. Ordinary stains whisk off with a damp cloth. Scuffing won't mar its deeply textured beauty. You can specify or recommend Masland Duran on all types of home, institutional or commercial furniture with complete assurance of decorative compatability and client satisfaction. We will gladly send you samples of our latest pattern creations, including handsomely textured Bedford. Write. The Masland Duraleather Company, Dept. 36, Philadelphia 34, Pa.

*©Design 1954

Try the Modern PreCast Method

and Forget Leaks!

Make this easy test. It won't cost you a penny more and will save you important money from now on! Install a FIAT FLOOR in the next shower you build. You'll find it's the modern, money-saving solution to an age old building problem. You'll get conclusive proof that this is the right way to keep shower bath water where it belongs for the lifetime of the house.

Now you can install guaranteed leakproof FIAT PRECAST SHOWER FLOORS so economically there is no reason to again risk your reputation on intricate, multi-layer, built-up floors that are both inefficient and unsanitary. FIAT FLOORS are designed for use with any type shower wall material—come in a range of sizes—available in either PreCast *Terrazzo* or *Artstone*, both of which provide a smooth, joint free, easy to clean appearance with a warm foot-grip surface. And best of all, you can save up to 40% with FIAT FLOORS, according to leading builders who have installed them. Performance proved by thousands now in use! Get all the facts now. Write or wire today.

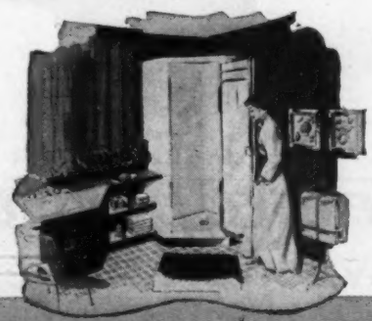
FIAT METAL MFG. COMPANY, 9319 BELMONT AVENUE, FRANKLIN PARK, ILL.

"I'm sold on PreCast shower floors", says builder

"Our experience with the Fiat shower floors installed in all of the 2600 homes of our Birchwood Park development has been satisfactory. This gigantic operation proved to us that the PreCast floor provides a better and more attractive shower floor. Today's home buyers are quick to spot quality features such as Fiat floors. I'm sold on your PreCast shower floors."

—Morris Sosnow

The Village of Birchwood Park, Jericho, Long Island, selects PreCast Shower Floors by Fiat.



Fiat makes a complete line of "Packaged Showers" ranging from models suitable for low-priced housing, to elegant models styled for the finest home.

n, money-saving way to build a shower

2 The shower floor slides into place. It is a self-contained monolithic unit with both metal tiling-in flange and drain cast integral. Plumber makes caulked drain connection quickly and easily while installing floor. No call-backs—no other trades required—ideal with any wall material.



3 The modern PreCast floor provides perfect drainage *permanently*. Not fastened to framing or bonded to floor, the FIAT floor is never damaged by building settlement. Shower walls are finished over tiling-in flange to complete an economical, attractive and absolutely *leakproof* shower.



TURN UPSIDE DOWN FOR THE ANSWER TO BETTER S



One perplexed property owner, who recently came to Fiat seeking a permanent solution to leaking, built-on-the-job shower floors, said: "Since I can't stop the leaks for long, I've decided to hang mammoth flower pots from the ceiling under each shower floor . . . at least it will hide the water-soaked ceiling and prevent damage to floors and furnishings below."

Fortunately for him, Fiat could prescribe a much easier method than the ordinary, old-fashioned shower floor construction. And, fortunately for builders, this method will give life-long insurance against complaints resulting from leaking, cracked shower floors in every house built today. It's the modern way, the Fiat PreCast Shower Floor way that has been enthusiastically used and approved by leading builders from New York to California. The most amazing thing about this new way to build showers is that it actually costs you less, and takes less time, than the old way.

FIAT®

First in Showers . . . since 1922

here's the modern,

1 No special construction or added support needed. Sub-floor is laid in regular manner, cutting small hole for drain connection. No need for lead pan, sub-layers, mortar, etc. Savings of on-the-job labor makes installed cost substantially less than built-up floors.



SHOWER CONSTRUCTION



Southwestern Michigan Tuberculosis Sanitorium.
Architects: Lee Black and Kenneth Black, Lansing, Michigan

Carrara® Glass ...the material architects prefer for operating room walls!

In specifying a material for the walls of operating rooms, a most important consideration is the maintenance of hospital standards of sanitation. That's why many leading architects prefer Carrara Glass for this application.

Carrara is all pure glass. Its smooth surface, mechanically ground and polished, offers no foothold to germs and bacteria. And the true, even joints between the large sections of Carrara discourage the collection of dust and dirt. In addition, the homogeneous structure of Carrara Glass gives it the ability to stand up under rigorous hospital cleaning without checking, crazing, staining; makes it impervious to the attacks of water, acids and cleaning compounds.

Carrara Glass is a beautiful material and contributes materially to the appearance of any room or structure. It comes in ten colors, many thicknesses. For more information, write to Pittsburgh Plate Glass Company, Dept. 5334, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

Carrara ...the quality structural glass

PPG

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



A new high in **HIGH VELOCITY**



The photograph above shows main banking floor of the First National Bank in Dallas. Note how straight line All-Air High Velocity units blend perfectly into the architectural design. *See next page for detail.*

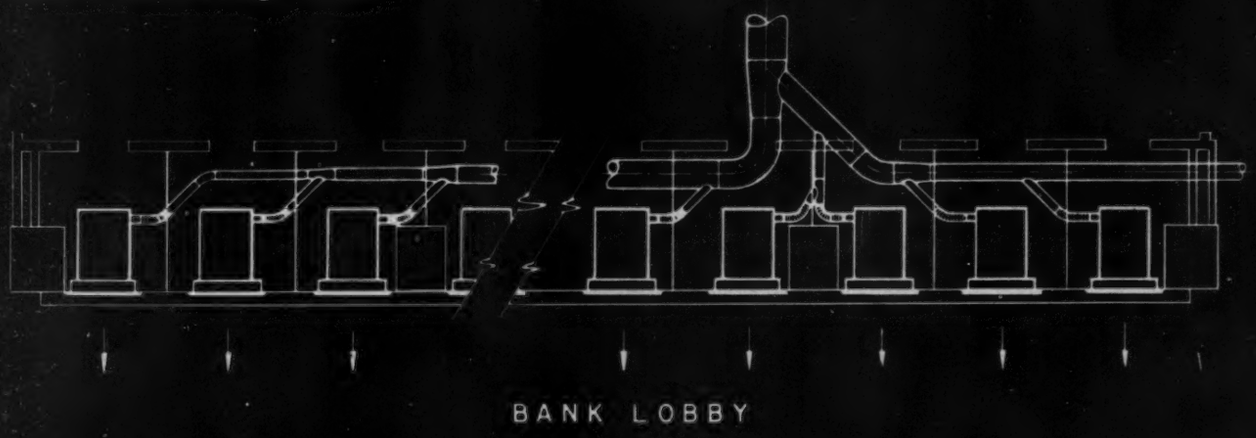
The All-Air High Velocity system also provides draftless comfort throughout the bank as well as in the second floor executive offices (shown at left). *See next page for detail.*

Architect: George L. Dahl

Consulting Engineer:
Landauer, Guerrero & Shafer

Contractor:
C. Wallace Plumbing Co.

Main banking floor



Sketch of photograph on preceding page shows the installation of twenty-four Anemostat 36-inch HPSL-100 High Velocity units, each supplying 200 cfm. A total of 4800 cfm is delivered to the main banking floor.

These pages illustrate the use of the Anemostat All-Air High Velocity distribution system in a modern air-conditioned bank. Anemostat High Velocity units are also being used throughout the country in many other applications such as hospitals, schools, department stores, office buildings and plants. • Here are some of the important architectural and engineering advantages of the Anemostat All-Air High Velocity distribution system. It can be used with smaller than conventional ducts. It can be installed faster and at less cost. It requires no coils, thus eliminates leakage, clogging and odors. Anemostat round, square and straight line diffusers with high velocity units are adaptable to a wide variety of architectural designs.

For latest data on Anemostat All-Air High Velocity units, write on your business letterhead for new Selection Manual 50.



Second floor executive offices



Diagrammatic ceiling view of offices on preceding page. This shows the installation of five Anemostat HPCM-1-100 High Velocity units, each supplying 125 cfm.

ANEMOSTAT®

DRAFTLESS *Aspirating* AIR DIFFUSERS

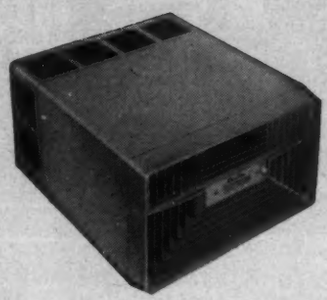
ANEMOSTAT CORPORATION OF AMERICA

10 East 39th Street, New York 16, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

"No Air Conditioning System Is Better Than Its Air Distribution"

Our 101st Year of Successful Manufacturing Experience



NEW Attractive Window Units up to 1½ tons for commercial and residential use



Package Units—2, 3, 5, 7½ and 10 tons. Choice of Open or Semi-hermetic Compressors... and 15 ton packaged central type units.

Curtis AIR CONDITIONING

Units Are Your Assurance of Client Satisfaction

The Curtis line is precision-built to assure a long life of trouble-free service. You can specify Curtis air conditioning equipment with the assurance that it will never let you down.

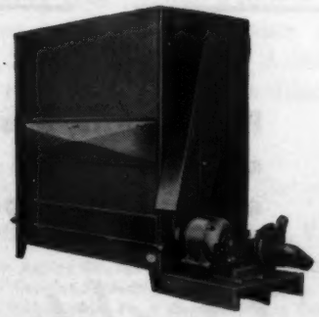
- ✓ **Installation is fast and easy.**
- ✓ **Maintenance costs are low.**
- ✓ **Priced to meet competition.**
- ✓ **Smooth, quiet operation.**
- ✓ **A Curtis Unit for every job— a complete range of sizes and types.**

See Curtis data in Sweets Catalog File, and write for your free copy of NEW *Curtis* Architects' Air Conditioning Manual.

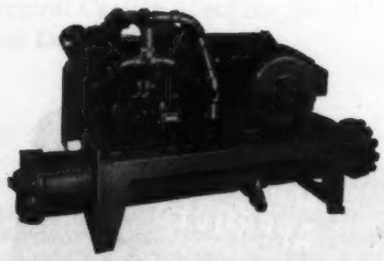
RESIDENTIAL... INDUSTRIAL... COMMERCIAL



Residential Cooling and Heating Units



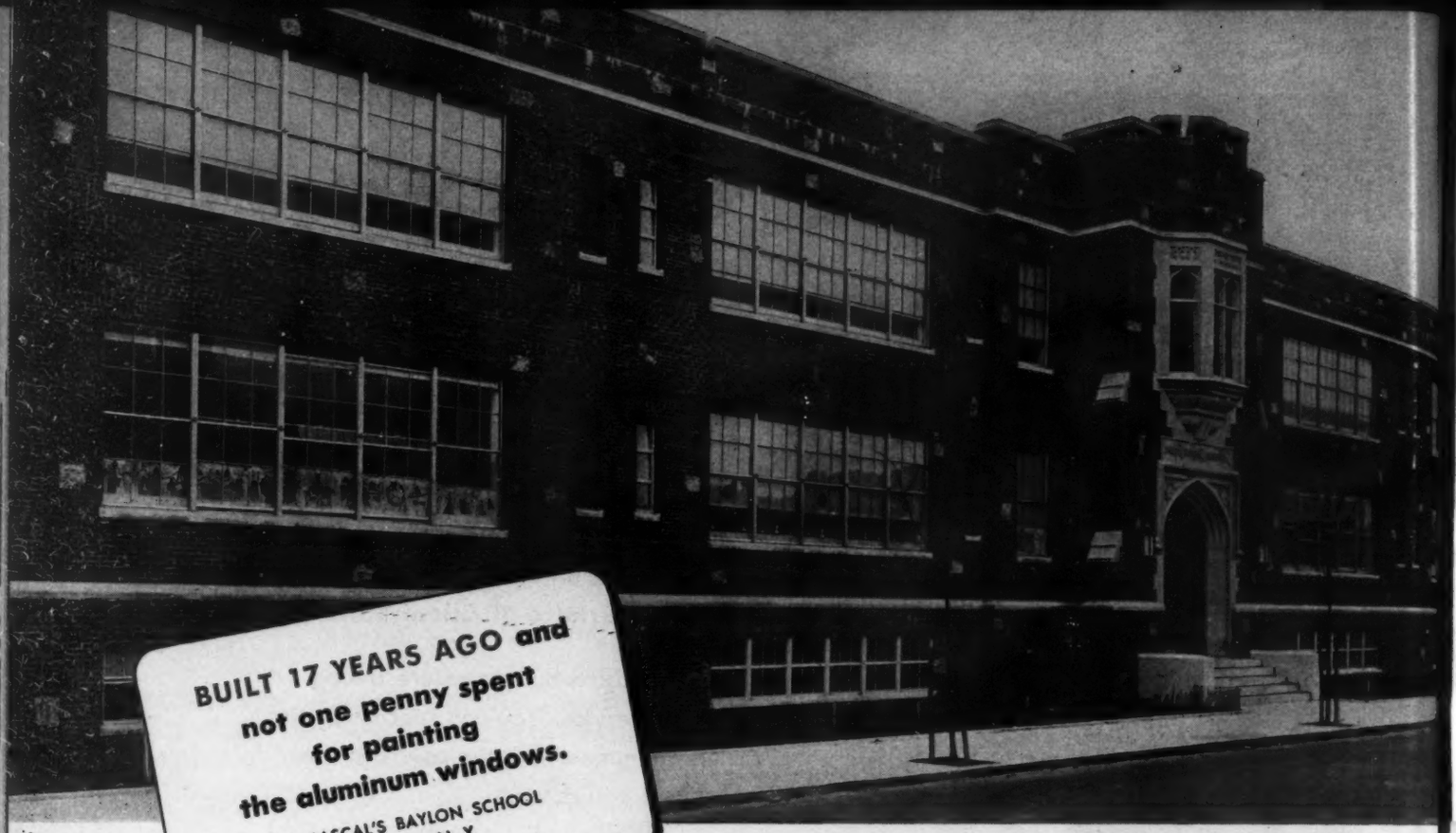
Air handling units, cooling towers, and evaporative condensers



Water Cooled Condensing Units— through 80 tons

Also manufacturers of compressors and hoists for industrial uses and compressors, lifts and car washers for the automotive service industry.

Curtis **REFRIGERATING MACHINE DIVISION**
of Curtis Manufacturing Company
1986 Kienlen Avenue, St. Louis 20, Missouri



BUILT 17 YEARS AGO and not one penny spent for painting the aluminum windows.

ST. PASCAL'S BAYLON SCHOOL
St. Albans, N. Y.
Architect: F. J. Burmeister

EXPERIENCE PROVES...

YOU CAN SAVE MONEY

WITH WINDOWS THAT

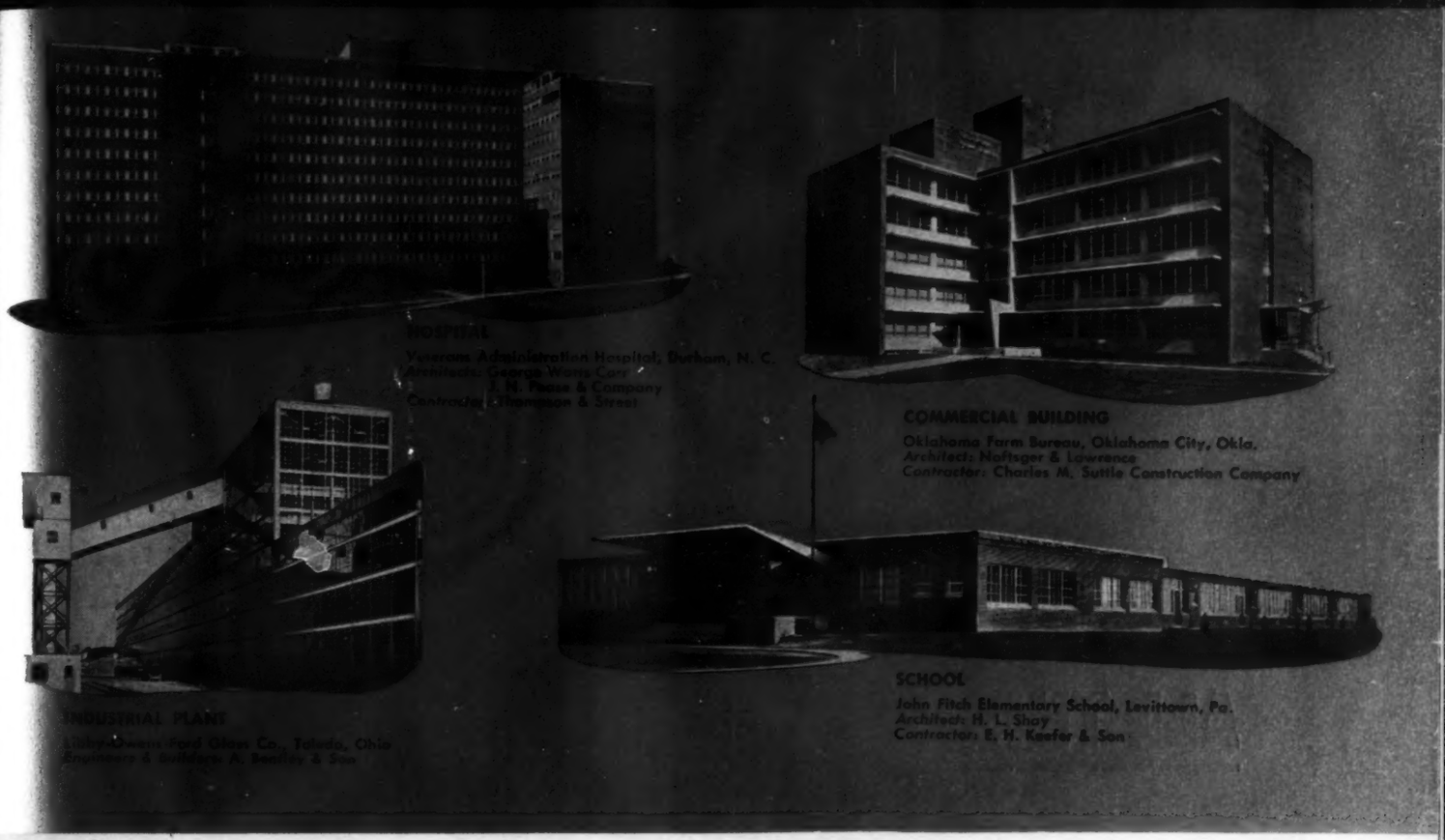
NEVER NEED PAINTING!



For schools, hospitals, apartments, commercial and industrial buildings, where maintenance expense is to be kept at a minimum, insist on

Quality Approved

ALUMINUM



HOSPITAL
Veterans Administration Hospital, Durham, N. C.
Architects: George Watts Carr
J. N. Pease & Company
Contractor: Thompson & Street

COMMERCIAL BUILDING
Oklahoma Farm Bureau, Oklahoma City, Okla.
Architect: Noftsger & Lawrence
Contractor: Charles M. Suttle Construction Company

INDUSTRIAL PLANT
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Engineers & Builders: A. Bentley & Son

SCHOOL
John Fitch Elementary School, Levittown, Pa.
Architect: H. L. Shay
Contractor: E. H. Keefer & Son

ALUMINUM WINDOWS REDUCE MAINTENANCE EXPENSE TO A MINIMUM

Today, more than ever before, school officials, hospital superintendents, building owners and mortgage bankers are *all* interested in keeping maintenance expense at a minimum.

Experience in hundreds of schools (like the one shown on opposite page,) in hospitals and other types of buildings erected 15 to 25 years ago shows that not one penny of expense was ever required for painting the aluminum windows.

Aluminum windows (whether they be double-hung, casement, awning or projected type) are the only practical, reasonably-priced windows that *never* require painting... that cannot rust or rot, warp or swell... that retain their trim, modern-looking appearance for the life of the building.

A WORD OF CAUTION—Remember, that only aluminum is rustproof through and through. Mere surface protection against rust is not enough. Wear, unintentional scratches in delivery or installation may nullify any protective surface coating and soon require painting.

"Quality-Approved" aluminum windows are available through many manufacturers in sizes and styles that fit any exterior design treatment. For your protection and full satisfaction, insist on the "Quality-Approved" Seal when you specify or OK specifications.

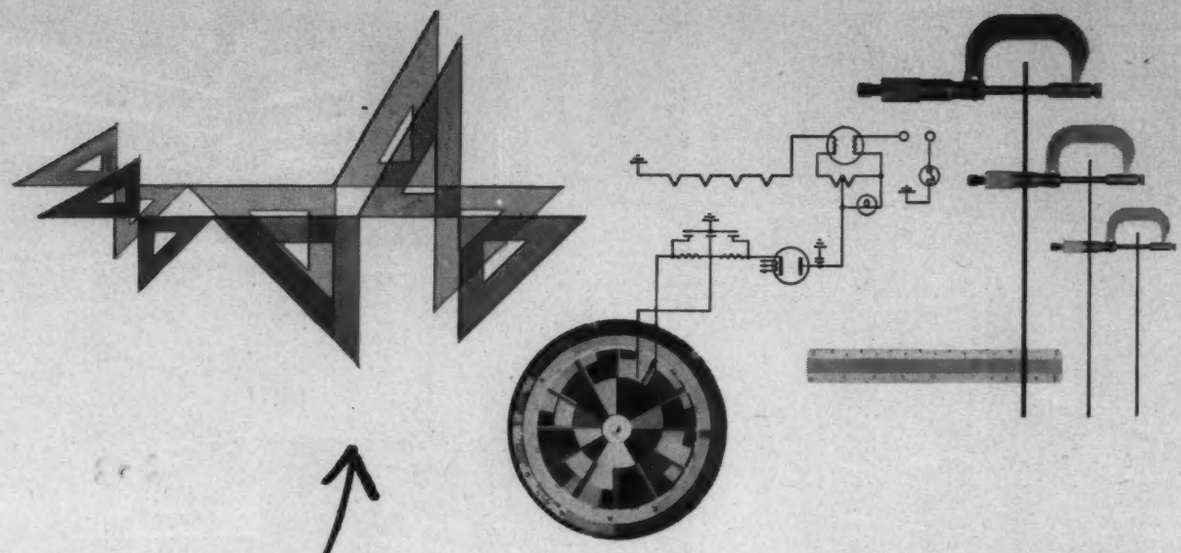
For a copy of our latest window specifications book and names of approved manufacturers, consult Sweet's Architectural Catalog (Section 16a/ALU) or write direct to Dept. AR-9.

Aluminum Window Manufacturers Association

75 West Street, New York 6, N. Y.

MEMBERS: Alcasco Products, Inc., Detroit, Mich. • The Wm. Bayley Co., Springfield, Ohio • Beurne Products, Inc., El Cajon, Calif. • Coco Steel Products Corp. (Sterling Aluminum Window Division), Chicago, Ill. • Cupples Products Corp., St. Louis, Mo. • Duralite Window Corp., Knoxville, Tenn. • Fentron Industries, Inc., Seattle, Wash. • Michael Flynn Mfg. Co., Philadelphia, Pa. • General Bronze Corp., Garden City, N. Y. • Metal Arts Mfg. Co., Inc., Atlanta, Ga. • Reynolds Metals Co. (Parts Division), Louisville, Ky. • The F. C. Russell Co. (Aluminum Division), Bristol, Pa. • J. S. Thorn Co., Philadelphia, Pa. • Universal Window Co., Berkeley, Calif. • Ware Laboratories, Inc., Miami, Fla. • Windalume Corp., Kenvil, N. J.

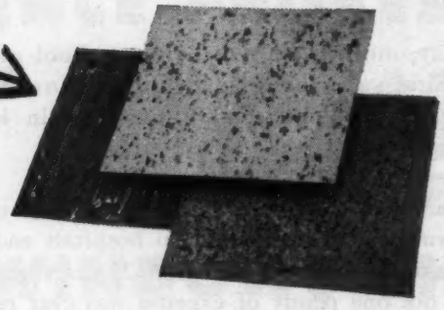
WINDOWS



ALL THIS

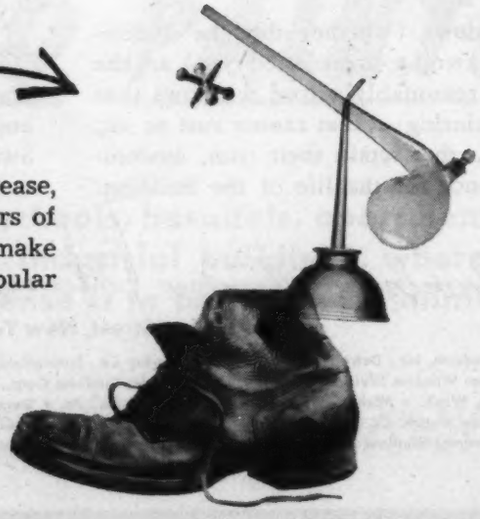
Every tile uniform in thickness: Colors matched by an electronically-controlled "color eye". Constant checking that makes every tile a straight-edged square. These are typical examples of the quality control that helps produce the 10 different tile products of the entire Kentile, Inc. line. All this . . .

TO MAKE THESE



. . . as smart-looking, long-wearing and easy-to-maintain as modern know-how makes possible. In a word, there is a Kentile, Inc. product tough enough to . . .

TAKE THIS



Stand up under heavy traffic — resist grease, alkalies and other liquids — give long years of rugged service. These qualities combine to make Kentile, Inc. products the world's most popular line of resilient tile floorings.

KENTILE, INC.

America's largest manufacturer of resilient floor tiles

KENTILE: Asphalt Tile . . . Carnival . . . Corktone • KENCORK: Cork Tile for Floors and Walls • KENRUBBER: Rubber Tile • KENFLEX: Vinyl Asbestos Tile . . . Carnival . . . Corktone • ROYAL KENFLOR Vinyl Tile . . . CUSHION BACK KENFLOR Vinyl Tile . . . also available by the yard • SPECIAL KENTILE: Grease-proof Asphalt Tile • THEMETILE, KENSERTS: Decorative Inserts • KENCOVE: Vinyl Wall Base • KENBASE: Wall Base



Like Sound Couplings?
GET NE Sherarduct
RIGID STEEL CONDUIT

Sound couplings . . . that's another big Sherarduct advantage!

Sherarduct's accurately cut threads let conduit ends butt inside the coupling . . . eliminate gaps that interfere with easy fishing. This provides a sound, thoroughly grounded coupling, sealing off moisture and corrosion.

The couplings are fortified by the same Sherardizing process of dry galvanizing that provides lifetime protection for Sherarduct conduit. Sherardizing actually alloys pure zinc with the steel wall of the conduit (including the hills and valleys of every thread), providing a permanent barrier to corrosives.

During the Sherardizing process, the steel conduit is normalized by gradual heating and cooling. Thus the conduit can be easily bent and formed on the job without springback or deformation.

After Sherardizing, a special clear acid-resistant coating, called Shera-enamel, is baked on inside and out. This completes the protection of all surfaces from corrosion, and produces a smooth raceway for fast, easy fishing of conductors.



LIFETIME CORROSION PROTECTION
•
EASY FISHING
•
ZINC PROTECTED THREADS
•
STRONG COUPLINGS
•
THOROUGH GROUNDING
•
EASY BENDING

Write today for your free Sherarduct facts book . . . see why Sherardizing makes Sherarduct "galvanized conduit at its best."

Sherardizing is galvanizing at its best . . . Sherarduct is galvanized conduit at its best

Listed by Underwriters' Laboratories, Inc.

50TH ANNIVERSARY

National Electric Products
PITTSBURGH, PA.
3 Plants • 10 Warehouses • 36 Sales Offices

Wherever Disaster Strikes...







The beautiful Hospital San Carlos, Bogota, Colombia, one of the finest in South America, is equipped with Kewanee Boilers.

Architect: Cuellar, Serrano, Gomez & Co. Ltd.; Consulting Architect: Smith, Erickson & Garden; Engineer: Cuellar, Serrano, Gomez & Co. Ltd.

Two No. 588, 125 lb. Kewanee Boilers installed in the Hospital San Carlos in Bogota, Colombia. They assure power expansion when needed—an important factor when the lives of patients are at stake.

HOSPITALS THE WORLD OVER DEPEND ON

KEWANEE reserve plus rated boilers

WITH 50% EXTRA POWER

WHEN steam power may mean life or death to hospital patients . . .

WHEN emergencies demand maximum temperature, split-second sterilization of instruments . . .

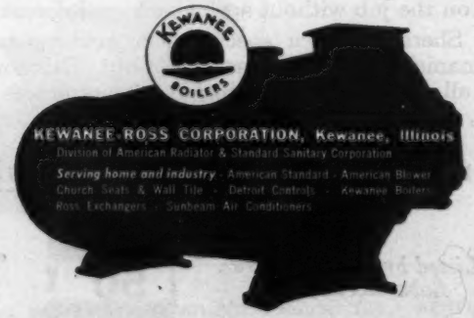
WHEN unfailing power is needed to bring light to the delicate techniques of modern surgery . . .

WHEN the operating rooms of hospitals are theatres of extreme urgency . . .

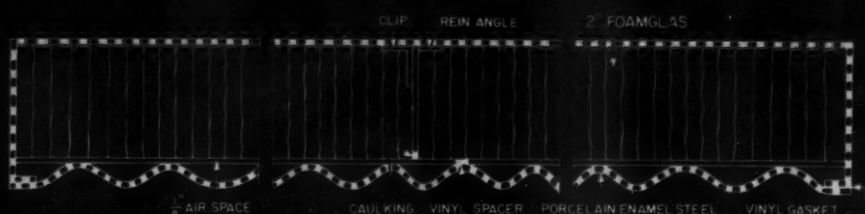
That is when Kewanee Reserve Plus Rated Boilers become a necessity—because they have the reserve power for additional capacity requirements.

With a rating plan based on the commercial code of the Steel Boiler Institute, Kewanee Boilers certify 50% or more extra built-in power. This extra power assures the ability to treat more sufferers when epidemics or disaster strike. Modern hospitals must have the foresight to prepare for major disasters such as earthquakes, tornadoes, fires and accidents which bring masses of emergency cases to the operating rooms.

Kewanee Boilers, rated on nominal capacity with built-in reserve, can take care of expanding loads created through disaster. They offer "cruising speed" operation which means savings on fuel and repairs. Choose Kewanee and be prepared if disaster strikes.



You can depend on KEWANEE engineering



Architect: Vincent G. Kling, A. I. A., Philadelphia, Pa. • *Consultant:* I. M. Pei, New York, N. Y. *General Contractor:* Turner Construction Co., New York, N. Y. • *Panel Manufacturer:* Ingram-Richardson Mfg. Co., Beaver Falls, Pa. • *Roofer:* Wm. C. Kulzer Co., Philadelphia, Pa.



The architect, members of his staff and RCA's representative check progress at the job site during erection of the five Cherry Hill buildings. The owner and the architect report: "We overcame design problems plaguing grid-panel pioneers by insulating the porcelain enamel panels with 2" FOAMGLAS.

Unique porcelain enamel-cellular glass sandwich developed for RCA's Cherry Hill curtain walls



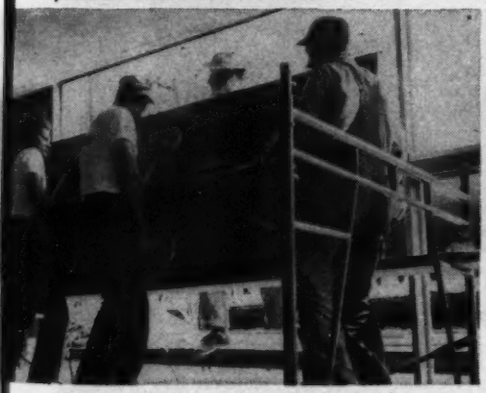
"We avoided any moisture problem by providing a ⅛" air space between the insulation and the outer porcelain enamel skin (detail above).



"Moisture can accumulate only in the air space and runs down moisture-proof FOAMGLAS to a weep strip. Caulking seals joints.



"High rigidity of FOAMGLAS and vertical corrugations of outer skin prevent 'oil-canning' or dimpling.



"Completed 94" x 34" PORCELPANELS* weighing just 6½ lbs. per sq. ft. were easily lifted into place.
* ® Ingram-Richardson Mfg. Co.



"Our unique panels combine ultra-modern appearance and high insulating efficiency (U factor 0.15)... cost just $4.50 per sq. ft. erected in place.



"Lift slab method cut construction time and costs. Roofing materials were raised right on the top slab.



"We also insulated most roofs with FOAMGLAS. Its high strength permits heavy foot traffic, minimizing need for catwalks.



"FOAMGLAS gives our Cherry Hill buildings added protection, too, because it's fireproof."

Use coupon today for a copy of our brand new booklet on latest curtain wall designs which utilize . . .

FOAMGLAS®

the cellular, stay-dry insulation

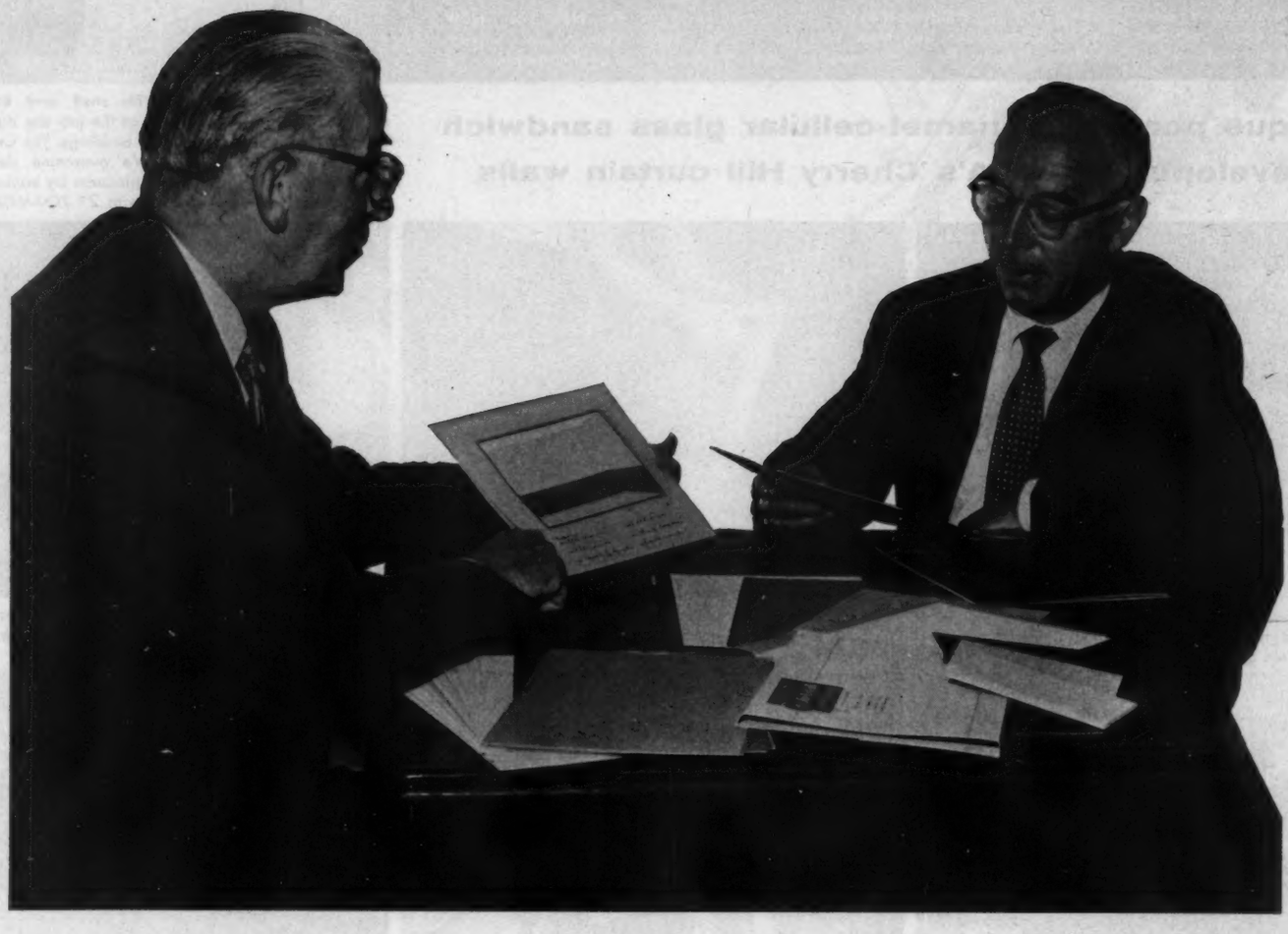
Pittsburgh Corning Corporation

Dept. B-95, One Gateway Center
Pittsburgh 22, Pennsylvania
In Canada: 57 Bloor St. W., Toronto, Ontario

☐ Please send me the brand new booklet on FOAMGLAS insulation for prefabricated curtain wall panels and other dry wall construction.
☐ Send engineer to discuss a special insulating problem.

Name_____
Company_____ Title_____
Address_____
City_____ Zone_____ State_____

How the P&L COLOR STYLING SERVICE *can help* YOU



Your Pratt & Lambert representative is an experienced color consultant — trained to cooperate personally and promptly in producing complete color plans which coordinate paints, stains and enamels with all other color factors.

His suggestions will represent completely integrated, perfectly articulated color sequences with a unified central theme, but with refreshing individuality in specific rooms and areas. His styling will be realistic and practical — in keeping with the results *you* want and consistent with the project and budget.

Acceptance of the Pratt & Lambert Color Styling Service implies no obligation.

ASK YOUR PRATT & LAMBERT REPRESENTATIVE FOR THIS SERVICE OR WRITE

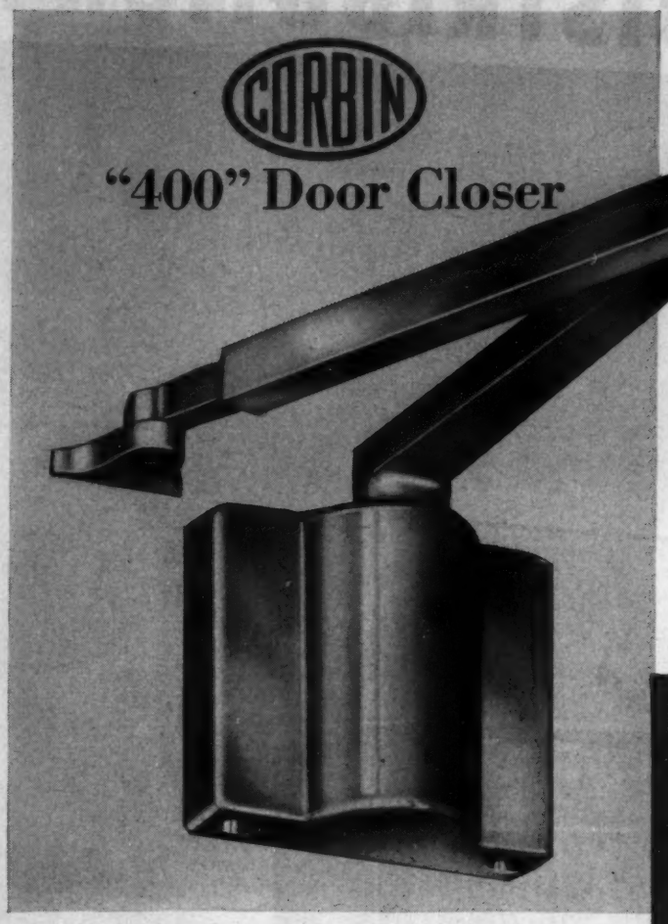
Your nearest Pratt & Lambert Architectural Service Department: 3301 38th Avenue, Long Island City 1, N. Y. • 75 Tonawanda Street, Buffalo 7, N. Y. • 326 West 26th Street, Chicago 16, Ill. • 254 Courtwright Street, Fort Erie, Ontario.

PRATT & LAMBERT-INC.

A Dependable Name in Paint since 1849

NEW YORK • BUFFALO • CHICAGO • FORT ERIE, ONTARIO

Unfailing performance!

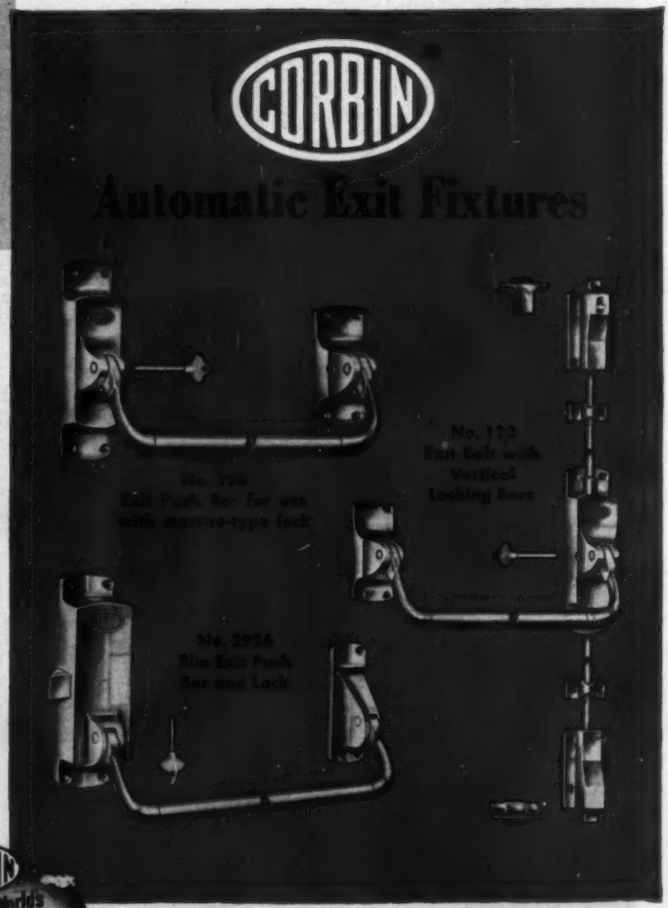


for LONG SERVICE on *any* door

Here's a door closer unequaled for strength, beauty, and sustained performance—the Corbin "400". Every part is precisely machined to assure years of trouble-free operation. Its compact, attractively designed housing projects but 1¾" from the door face. Yet the Corbin "400" is strong enough to handle *any* door application with efficient ease.

The Corbin "400" Door Closer offers 4 different combinations of speed control . . . a Silence Adjuster which eliminates *all* audible contact between door and stop . . . a built-in hold-open device for 18 different positions.

Available with parallel arms, fusible link arm, and special brackets for unusual door conditions.



for INSTANT ACTION on *emergency* doors

Where quick-opening action and simplified maintenance are the key requirements, you can recommend these Corbin Exit Fixtures with complete confidence. Their rugged simplicity of construction . . . friction-free Oilite bearings . . . permanently-aligned unit design . . . assure responsive action at *all* times. Other features include drop-forged levers and a foolproof bar locking device.

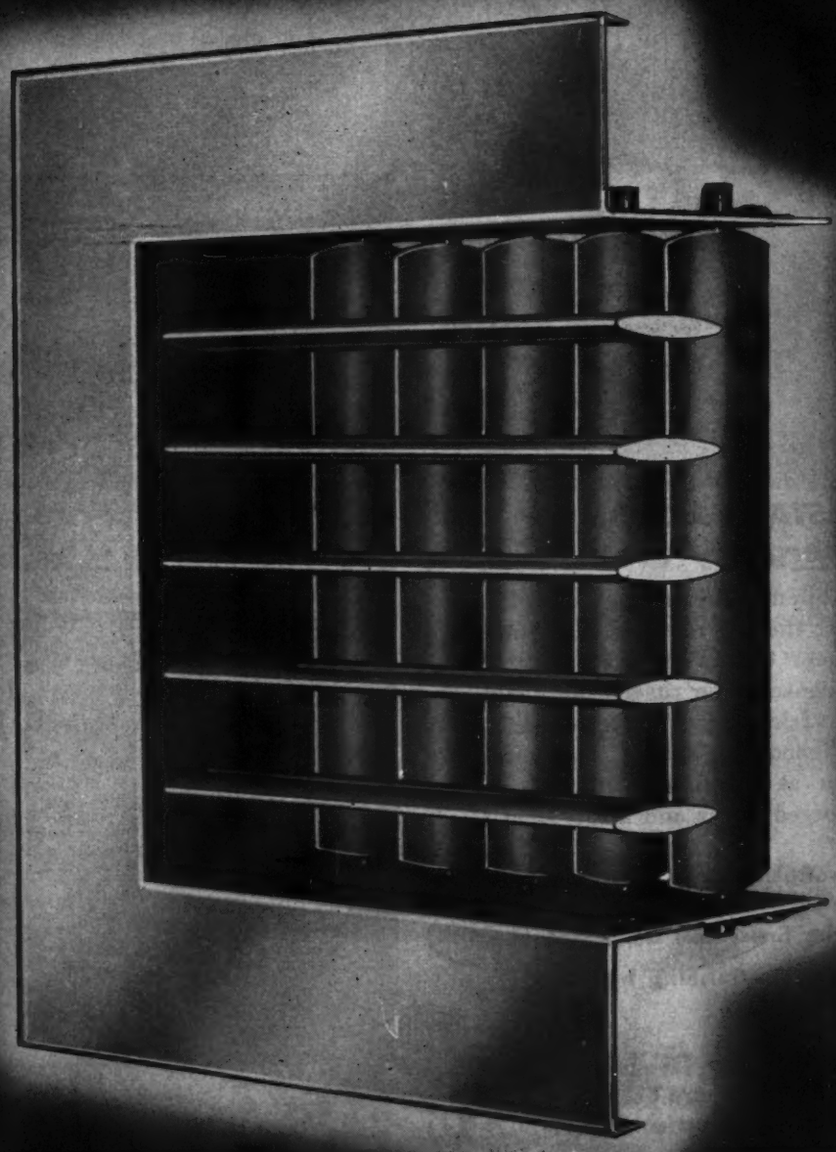
Available in solid brass, bronze, and aluminum.

Where only the finest will do, specify CORBIN —first choice in finishing hardware!

P & F Corbin Division
The American Hardware Corporation
New Britain, Connecticut, U.S.A.

CORBIN The World's most widely used BUILDERS' HARDWARE

ROOM AIR DISTRIBUTION . . .



IS NOT COMPLICATED

50% OF GRILLE ENGINEERING & ADJUSTMENT PROBLEMS

NEW MORE AIR CONTROL BUILT-IN

By engineering MORE AIR CONTROL per square inch into each diffuser and grille . . . *right at the factory* . . . Titus simplifies all phases of grille *specification, selection, installation* and *adjustment.* Eliminates any necessity for special factory schooling or instruction at the contracting, engineering or tradesman level. Any workman can install a Titus grille without unbalancing the whole expensive system.

NEW MORE SIMPLE INSTALLATION

Install grille in 2 easy steps. (1) Fasten grille in place with screws. (2) Adjust louvers for correct air patterns. Titus *makes it easy, makes it simple* to obtain correct air patterns . . . patterns that give *maximum room comfort . . . from any air conditioning system.*

NEW MORE FLEXIBILITY OF ADJUSTMENT

Most important . . . any miscalculations that have crept in during the installation period may be simply and easily corrected by quick adjustment of streamlined Airfoil louvers. ADJUSTING IS DONE *WITHOUT* REMOVING GRILLES FROM WALLS. COSTLY TIME-CONSUMING "CALL BACKS" ARE ELIMINATED.

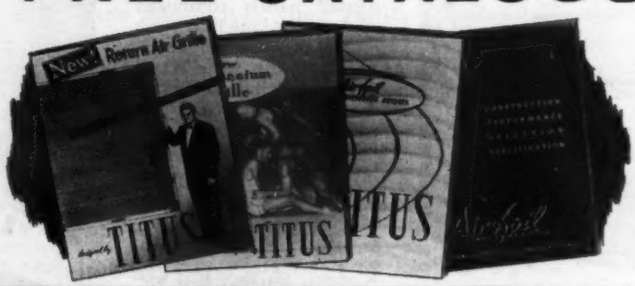
NEW SIMPLIFIED, FOOL PROOF DESIGN

All Titus grilles and diffusers are built under the most rigid, precision-controlled standards. They give finest air diffusing performance. Air control cannot be lost at the installation level. Titus grilles are so carefully constructed it is almost impossible to have anything but correct diffusion of air . . . no matter who installs or adjusts them.

SETS PERFORMANCE STANDARD FOR ENTIRE AIR CONDITIONING SYSTEM

Directs air where it is needed. Keeps uniform temperatures throughout room. Eliminates old-fashioned drafts . . . low level stratification. Truly controls comfort . . . *at the room level* . . . THE ONLY AREA WHERE THE UNIT'S ENTIRE HEATING OR COOLING PERFORMANCE IS JUDGED.

FREE CATALOGS



Get information on the complete line of Titus grilles now.
Order actual samples. Look at them. Hold them in your hands. Test them. See for yourself why Titus can save you money. Can give you better air diffusion performance . . . in every type of building where air conditioning is used.

TITUS MANUFACTURING CORP., WATERLOO, IOWA

Gentlemen: I wish to simplify my grille installation problems and to lower my grille installation costs. Please send me complete information on the following Titus grilles.

☐ Supply Grilles & Registers ☐ Return Air Grilles ☐ Volume Controllers
☐ Frames and Accessories ☐ Gymnasium Grilles

Name

Address

City State

To meet today's trend in designing buildings of ALL classes —

Bayley

Curtain Wall Systems

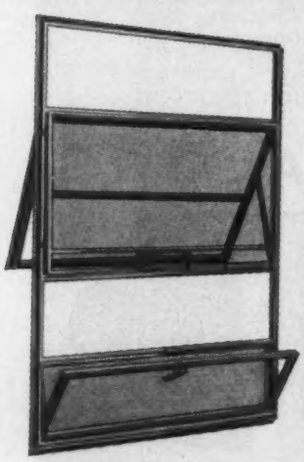


1930

Worcester Pressed Steel Co., Worcester, Mass. Archt. — J. D. Leland Co., Boston, Mass. Bldrs.—Harty & Brown, Boston, Mass.

We invite you to take full advantage of our 30 years of experience in designing and building WINDOW CURTAIN WALLS

Think of it! Many Bayley engineers are *lifetime specialists* in curtain-wall window construction! For Bayley's 76 years of progress in metal fabricating and window making includes 30 years in the design and production of *window curtain-walls!* And Bayley protects your confidence with a record for quality production, thorough pre-engineering and follow-through services, integrity, and financial soundness (ask those who have dealt with Bayley). When you want to be sure, be *sure* it's Bayley.

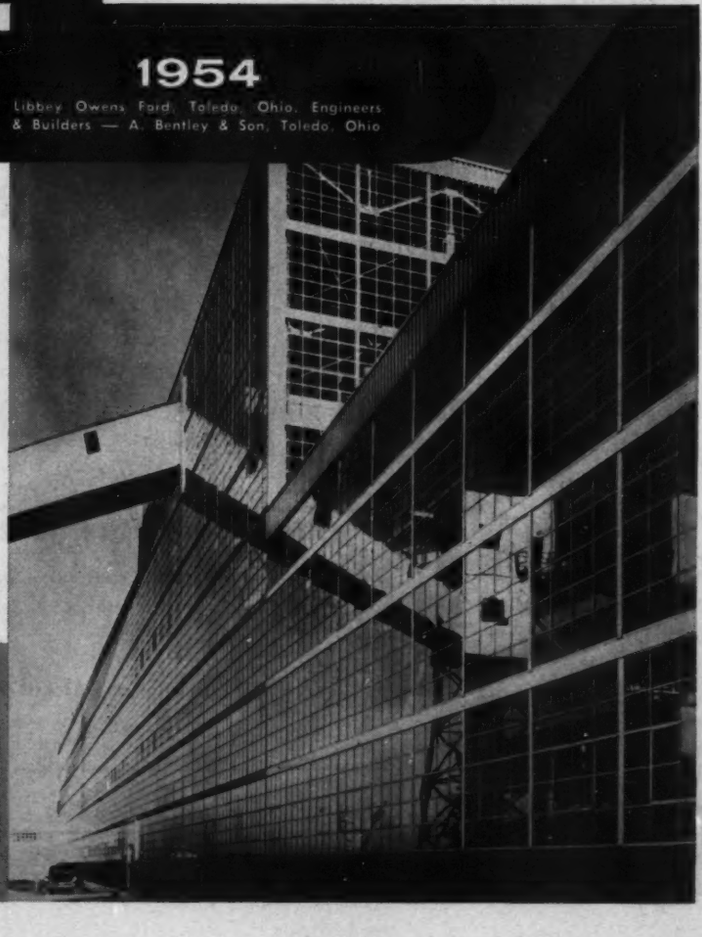


The Bayley Intermediate Projected Window (steel or aluminum) is the basic element in Series 150 Curtain Wall Systems. It is also built into separate prefabricated panels composed of deep-sectioned framing members in the 450 Series. This permits wide flexibility in combining any of the newer wall-panel materials and design trends with both fixed and ventilating window areas, to meet any need for light, air, vision, and beauty.

See Bayley in Sweet's. Complete catalogs on aluminum windows, 16a/Bay; steel windows, 16b/Ba.

1954

Libbey Owens Ford, Toledo, Ohio. Engineers & Builders — A. Bentley & Son, Toledo, Ohio



76 *Years of* RELIABILITY

The WILLIAM BAYLEY Co.

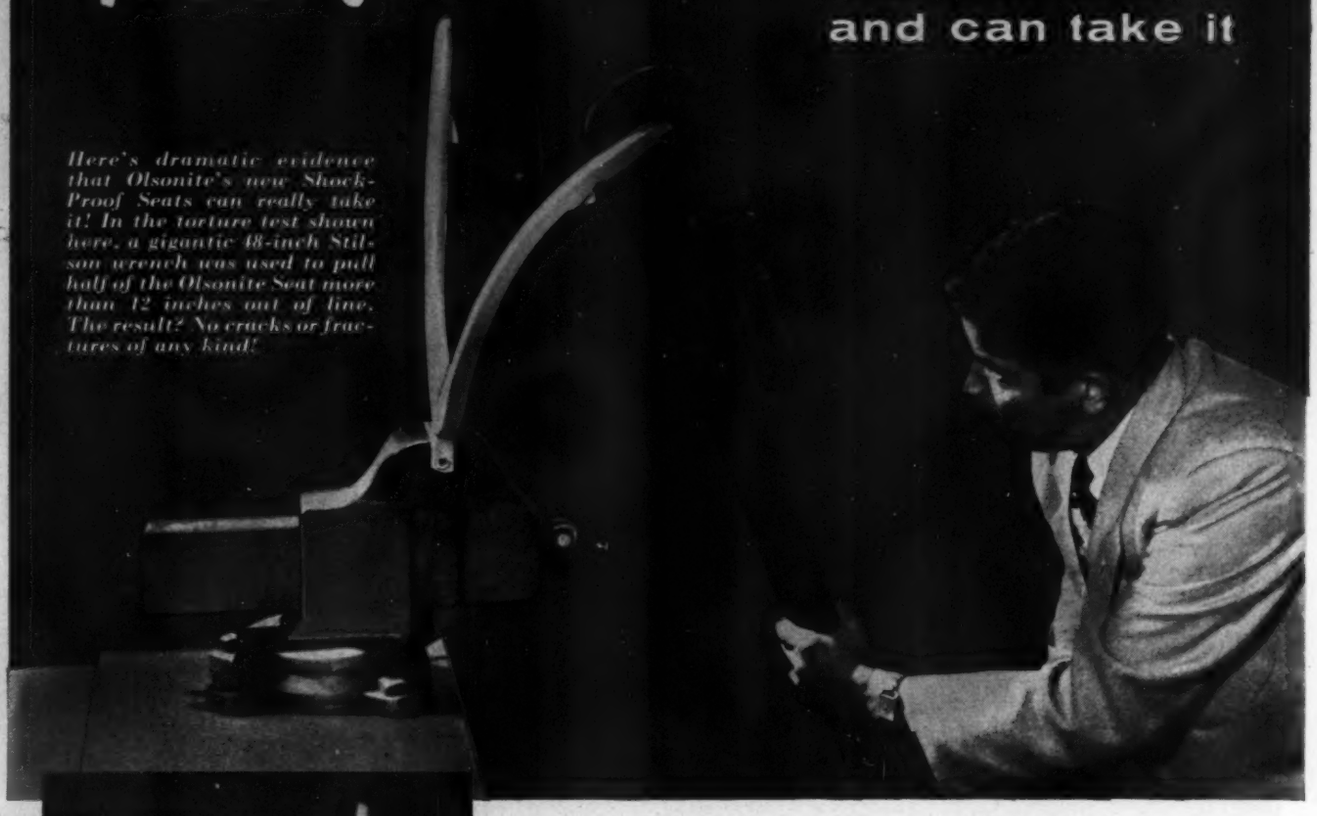
Springfield, Ohio

District Sales Offices:

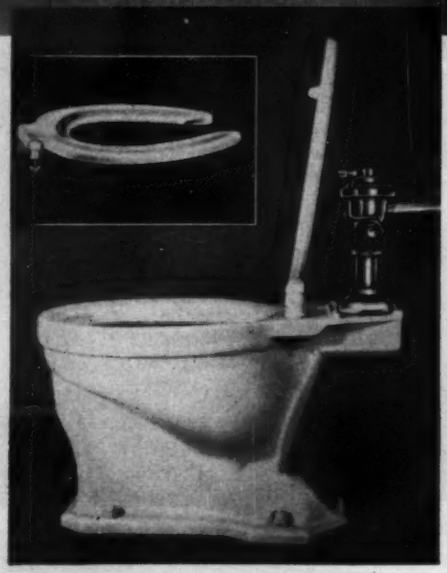
Springfield • Chicago 2 • New York 17 • Washington 16

Agents in All Principal Cities

NOW! a white seat that STAYS white and can take it



Here's dramatic evidence that Olsonite's new Shock-Proof Seats can really take it! In the torture test shown here, a gigantic 48-inch Stillson wrench was used to pull half of the Olsonite Seat more than 12 inches out of line. The result? No cracks or fractures of any kind!



In addition to the regular bowl model (#5) and elongated bowl (#10), the amazing new Olsonite Shock-Proof industrial and commercial seats are available with a concealed check hinge (#5CC and #10CC) made entirely of non-corrosive metal. A lug on the hinge posts locks against cutaway on insert in extended seat back, preventing the seat from being raised to more than 11° beyond perpendicular.

A-4

NOW YOU CAN SPECIFY WHITE SEATS for all industrial and public toilet installations—white seats that won't fade or "yellow" for a lifetime of normal use!

With the new Olsonite White Shock-Proof Seats, it's easier to keep that clean, sanitary appearance than with black seats. Shock-Proof Olsonite Seats have also proven their ability to withstand shocks 5 times greater than ordinary solid one-piece seats. Even deliberate abuse in public toilets and industrial installations won't crack, chip or break Olsonite Shock-Proof Seats—and they won't absorb water.

Like all Olsonite Seats, Shock-Proof models are solid one-piece construction—there is no applied finish to crack or peel. They are sanitary white *all the way through*. Be sure to specify the seat that *stays white*—the seat that can "take it" without damage for a lifetime of normal use—Solid Olsonite Shock-Proof Seats.

Olsonite's complete catalog is available on request. Please write on your letterhead to:

SOLID Olsonite SEATS

ORIGINATORS OF THE SOLID PLASTIC SEAT

Olsonite Shock-Proof Models Are Available In White or Black

SWEDISH CRUCIBLE STEEL COMPANY

Plastics Division, 8561 Butler Avenue, Detroit 11, Michigan


J&L
STEEL



School Builders:

Here's a Fitness Report on J&L Junior Beams

In 3 Years Architect D. Clarence Wilson used lightweight J&L Structurals in functional, low-cost design at 33 New Southern Illinois Schools



"Junior Beams . . . a good choice to keep material and handling costs to a minimum." — D. Clarence Wilson

Repeated use often provides the best evidence of how well a product performs. That's why J&L is proud of the record being established by lightweight J&L Junior Beams in Southern Illinois. Architect D. Clarence Wilson of Mt. Vernon first specified Junior Beams for the $800,000.00 Nashville High School, Nashville, Illinois in 1953. Since then Mr. Wilson has designed 33 schools ranging from the $80,000.00 Petty District Elementary School to the $975,000.00 Greenville High School at Greenville, Illinois.

In every one, J&L Junior Beam roof purlins have been specified. The reason as stated by Mr. Wilson, "Today's school must not only be attractive, functional, permanent and safe . . . it must also be economical to build. Junior Beams have proved a good choice to keep material and handling costs to a minimum."

Mr. Wilson's experience with Junior Beams is being shared by more and more cost conscious builders every day.

If you're engaged in light occupancy construction, you'll find Junior Beams offer you a really versatile, flexible structural member.

Write today for our new booklet covering J&L Junior Beams. It shows how Junior Beams are used as floor joists and roof purlins with typical end connections and loading and spacing tables for various spans.

Jones & Laughlin
STEEL CORPORATION — *Pittsburgh*

J&L STEEL

Jones & Laughlin Steel Corporation
466 Gateway Center • Pittsburgh 30, Pennsylvania

Please send me a free copy of your booklet, "J&L Junior Beams—the Lightest Hot Rolled Steel Structural."

see our catalog in S ARCHITECTURAL FILE or write for copy

Name_____

Company_____

Address_____



WITH NEW GETTY OPERATOR AND HINGE FOR POPULAR AWNING-TYPE WINDOWS

Easier window cleaning is but one of the advantages you can offer with this new No. 4711 Getty Operator and Hinge Set.

This Getty Operator works on a new and unique principle. It has a special kind of chain that becomes fully rigid when extended in opening an awning-type window. The operator holds the window firmly in any open position. It *closes and locks* the window securely without disturbing the screen—and without the separate lock many other operators require.

The hinge drops the sash from the frame, so that the outside of the window can be easily cleaned from inside the room. And both operator and hinge can be quickly and easily installed. There's no complicated hardware to fuss with or get out of order.

Specify Getty No. 4711 Sets for windows from 14 to 30 in. high and up to a maximum width of 48 in. Set #1 is for windows 14-17⅞ in. high; Set #2 for windows 18-23⅜ in. high; Set #3 for windows 23½-30 in. high. For complete information, including specification data, see your hardware consultant or write us direct now.



New Getty Operator and Hinge Set is easy to install. There's no complicated hardware.

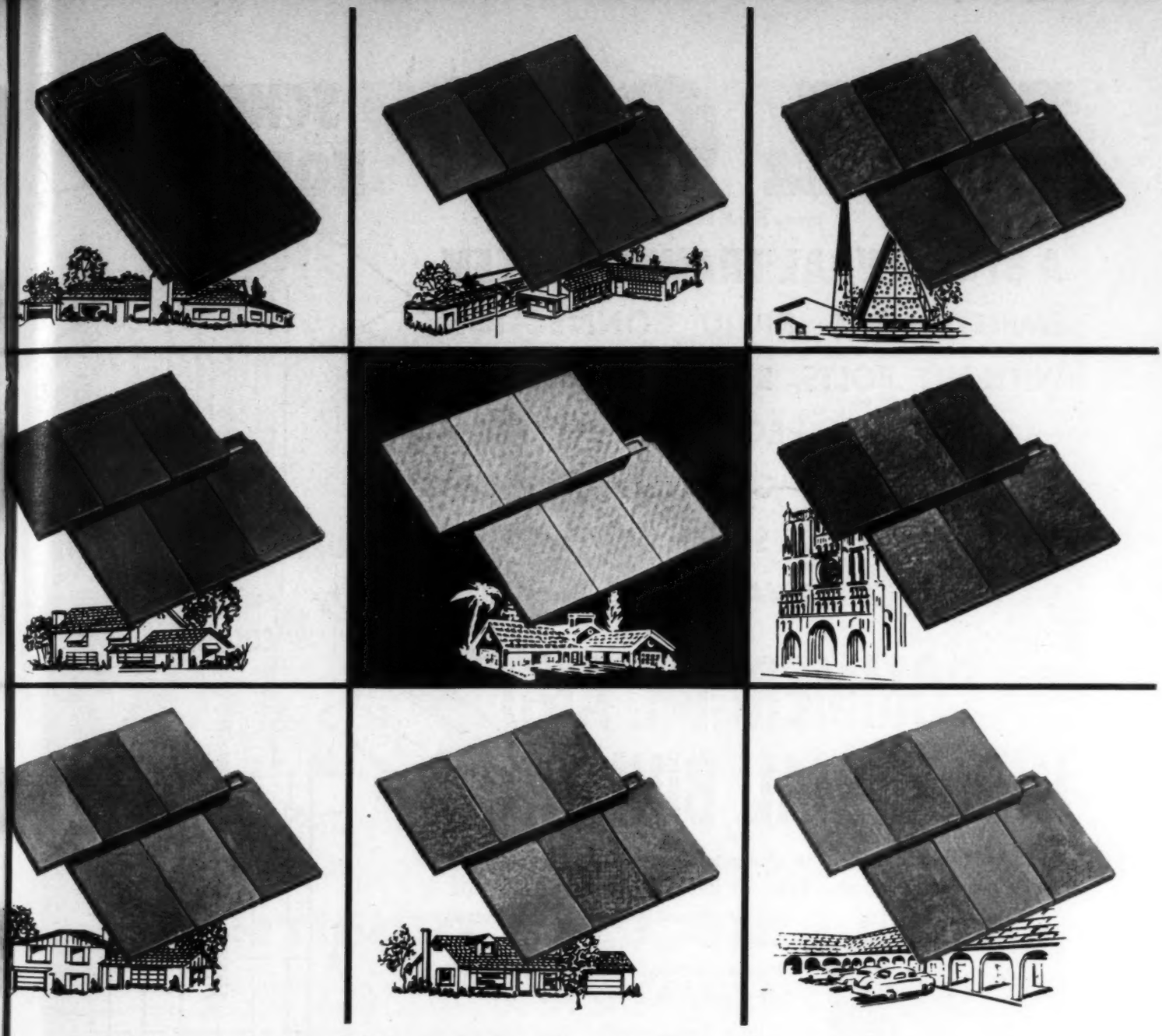


Special Getty chain becomes fully rigid when extended—locks window in any position.

Remember—More Getty Operators Are Used on Casement Windows Today Than All Other Makes Combined!

H. S. GETTY & CO., INC., 3348 NORTH 10TH STREET • PHILADELPHIA 40, PA.

Canadian representative: A. N. Ormsby Co., 23 Scott St., Toronto



More and More Architects are specifying Beautiful, Modern, Permanent—Roofs by Ludowici

These are illustrations of the Ludowici "Designer" tile—in fresh new colors, clean modern lines—these and other patterns and colors cost only a little more than ordinary roofing materials.

But the owner has the finest protection available from any roofing material—because Ludowici-Celadon Tiles are fireproof, permanent, colors never fade, Ludowici Tiles are washed clean and bright by every good rain.

Ludowici Tiles require no maintenance or repair. And the deep shadow lines and bright colors accent the best designs of today's architects. This is why these tiles are specified for the roofs of the finest contemporary residential, commercial, religious and institutional buildings.

Ludowici Tiles in colors, patterns, and textures to complement any architectural style—modern, transitional, or traditional—are available. Our representatives will assist the architect in his roof design. For information, see Sweet's File—Architectural, 8 f/Lu-1956.

Visit our display rooms or write for literature to the office nearest you.

DISTRICT OFFICES

Ludowici-Celadon Co.
75 E. Wacker Drive
Chicago 1, Ill.
Randolph 6-6740

Ludowici-Celadon Co.
565 Fifth Avenue
New York 17, N. Y.
Plaza 5-5040

Ludowici-Celadon Co.
740-15th St., N. W.
Washington 5, D. C.
National 8-8932

Ludowici-Celadon Co.
4801 Lemmon Avenue
Dallas 9, Texas
Lakeside 5866

Ludowici-Celadon Co.
12734 Woodland Ave.
Cleveland 20, Ohio
Sweetbriar 5-2929

REPRESENTATIVES

3955 First Ave., So.
Minneapolis, Minn.
Locust 9822

811 S. W. 8th St.
Miami 36, Florida
Franklin 4-8076

51 Crennel St., Crafton
Pittsburgh 5, Pa.
Walnut 1-4510

N. 207 Cincinnati Union Terminal
Cincinnati 3, Ohio
Main 1-6150

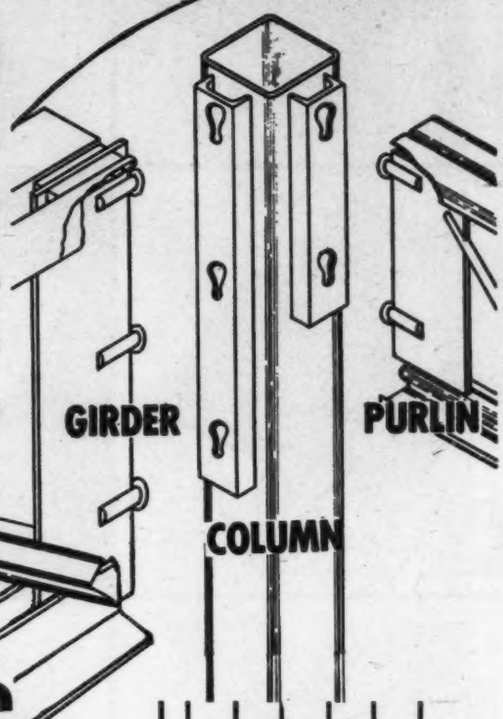
LUDOWICI-CELADON COMPANY 75 East Wacker Drive, Chicago 1, Illinois

V-LOK

TRADE MARK REGISTERED

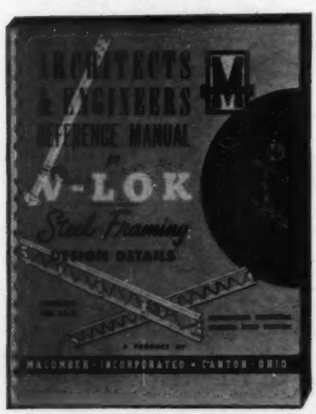
A STRUCTURAL FRAMING SYSTEM EMPLOYING A RIGID CONNECTION WITHOUT BOLTS, RIVETS OR WELDING — REDUCING ERECTION TIME FROM WEEKS TO DAYS—GETTING A BUILDING UNDER ROOF TO SPEED UP FINISHING WORK AND ADVANCE OCCUPANCY.

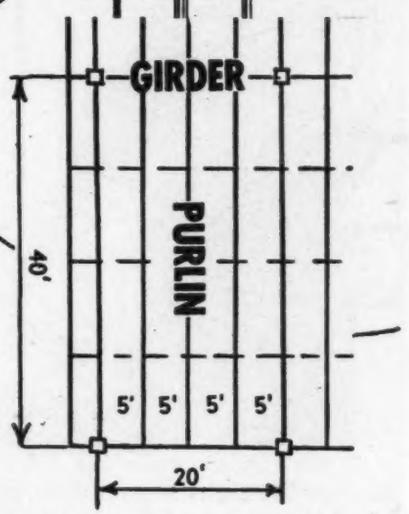
SCHOOLS
HOSPITALS



COMMERCIAL AND INDUSTRIAL BUILDINGS

Think back—think of all the products or systems ever designed to reduce construction costs. Then for factual proof of what V-LOK is doing in school work, for example, watch a big rambling high school frame erected complete, including steel deck, in a few days.





You're a tax payer. You can see in parents' faces what V-LOK is doing across the country to reduce the tax burden. Architects and Contractors are actually inviting parents to witness this construction achievement. It is obvious that a medical center, suburban insurance office, factory or warehouse will give YOU and the OWNERS the same advantage. One V-LOK job is so satisfying, others follow **Write for Design Manual**

A RIGID EXPANDABLE STEEL STRUCTURE

STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER INCORPORATED

CANTON 1, OHIO

• ENGINEERING • FABRICATING AND ERECTING •

NAILABLE STEEL JOISTS • LONGSPANS • BOWSTRING ROOF TRUSSES • METAL DECK • V-LOK STEEL FRAMING • STRUCTURALS



You get modern, on-the-job efficiency from fluorescent installations equipped with

CERTIFIED CBM BALLASTS

Everyone—the architect, fluorescent fixture manufacturer, distributor, electrical contractor and the ultimate user—wants fluorescent lighting installations to give satisfactory performance.

The easiest way to be certain of getting top efficiency is to insist that all fluorescent fixtures are equipped with CERTIFIED CBM BALLASTS.

Manufacturers of fluorescent tubes, who know how important ballasts are to the proper operation of their lamps, recommend and endorse the use of CERTIFIED CBM BALLASTS.

CERTIFIED CBM BALLASTS assure:

RATED LAMP LIFE • FULL LIGHT OUTPUT • LONG BALLAST LIFE • QUIET, TROUBLE-FREE OPERATION

Eight of the country's leading manufacturers of ballasts make CERTIFIED CBM BALLASTS. Participation in CBM is open to any Manufacturer who wishes to qualify.

Send for free new booklet, "Why It Pays to Use CERTIFIED CBM BALLASTS in Fluorescent Lighting Fixtures".





CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO



Flour City Ornamental Iron Co.

Specifies Alcoa Aluminum

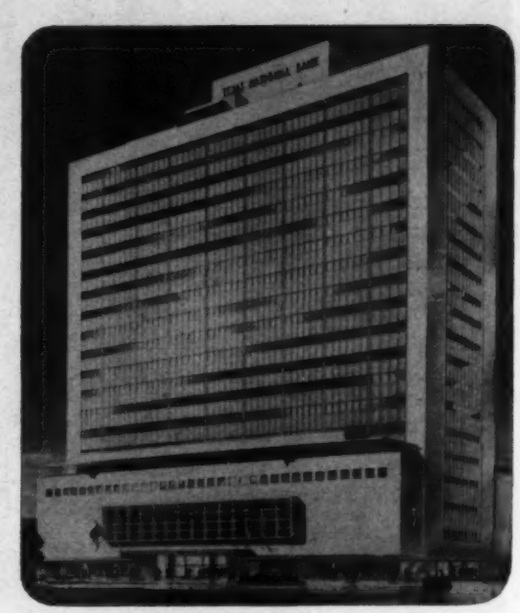
FROM TOP TO BOTTOM

The nation's newest aluminum-faced office building rises twenty-four stories above South Main Street, Houston, Texas.

The twenty-one hundred aluminum panels that sheathe the new Texas National Bank Building came from Minneapolis, Minn. There, the Flour City Ornamental Iron Co. fabricated the 4′3″ x 13′0″ panels, the store fronts, canopy fascia, flagpoles, louvers, windows, and roof copings. Alcoa® Aluminum specified for all items.

Flour City, one of the nation's oldest, largest, and most experienced architectural metal fabricators, contributed its talents and skills in the designing, engineering, production, and erection of the Republic National Bank Building, Dallas, Texas; the Mayo Clinic Diagnostic Building, Rochester, Minnesota; and many other aluminum-clad buildings. Alcoa Aluminum specified for all projects.

For complete information on Alcoa Aluminum and its building applications, from store fronts to roof copings, call your local Alcoa sales office. Or write: ALUMINUM COMPANY OF AMERICA, 1888-J Alcoa Building, Pittsburgh 19, Pennsylvania.



Texas National Bank Building, Houston, Texas. *Architect:* Kenneth Franzheim, A.I.A., Houston, Texas. *General Contractor:* Manhattan Construction Co., Houston, Texas. *Aluminum Contractor:* Flour City Ornamental Iron Co., Minneapolis, Minn.



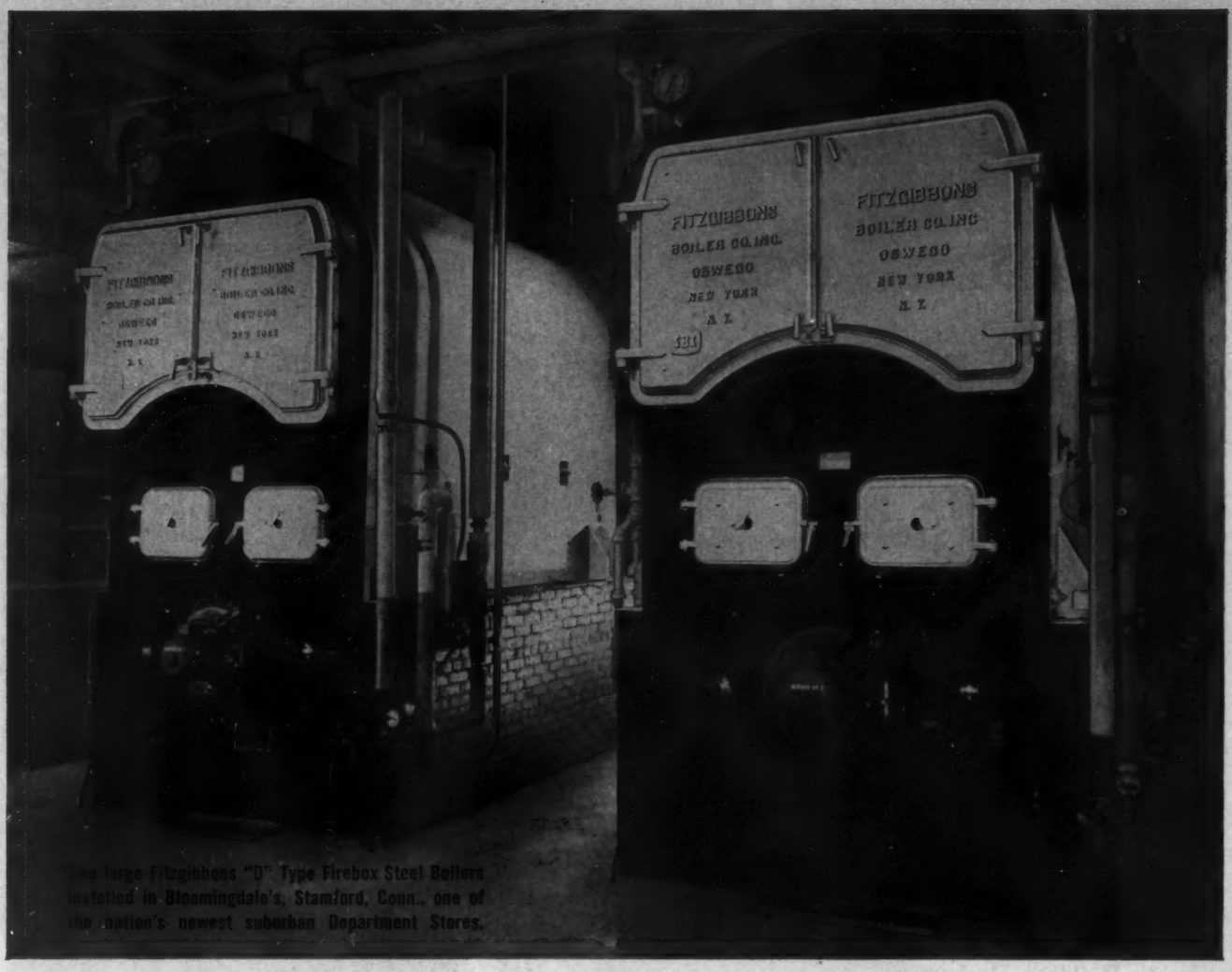
Over 2,100 panels were formed on a 750-ton hydraulic press in Flour City's shop. Complete design and erection services as well as fabricating facilities make Flour City an integrated aluminum contractor.

YOUR GUIDE TO ALUMINUM VALUE

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

©ALCOA



Two large Fitzgibbons "D" Type Firebox Steel Boilers installed in Bloomingdale's, Stamford, Conn., one of the nation's newest suburban Department Stores.

Sentinels of comfort... and comfort's cost!

FITZGIBBONS STEEL BOILERS give big building heating systems that extra insurance factor that means dependable heat and comfort at all times. Functioning as the heart of the system, these carefully engineered and ruggedly built boilers respond quickly and operate with superior fuel-saving efficiency. From any standpoint — ease of installation, fuel saving, convenient servicing—you just can't beat a Fitzgibbons. Make sure it figures in your next job.

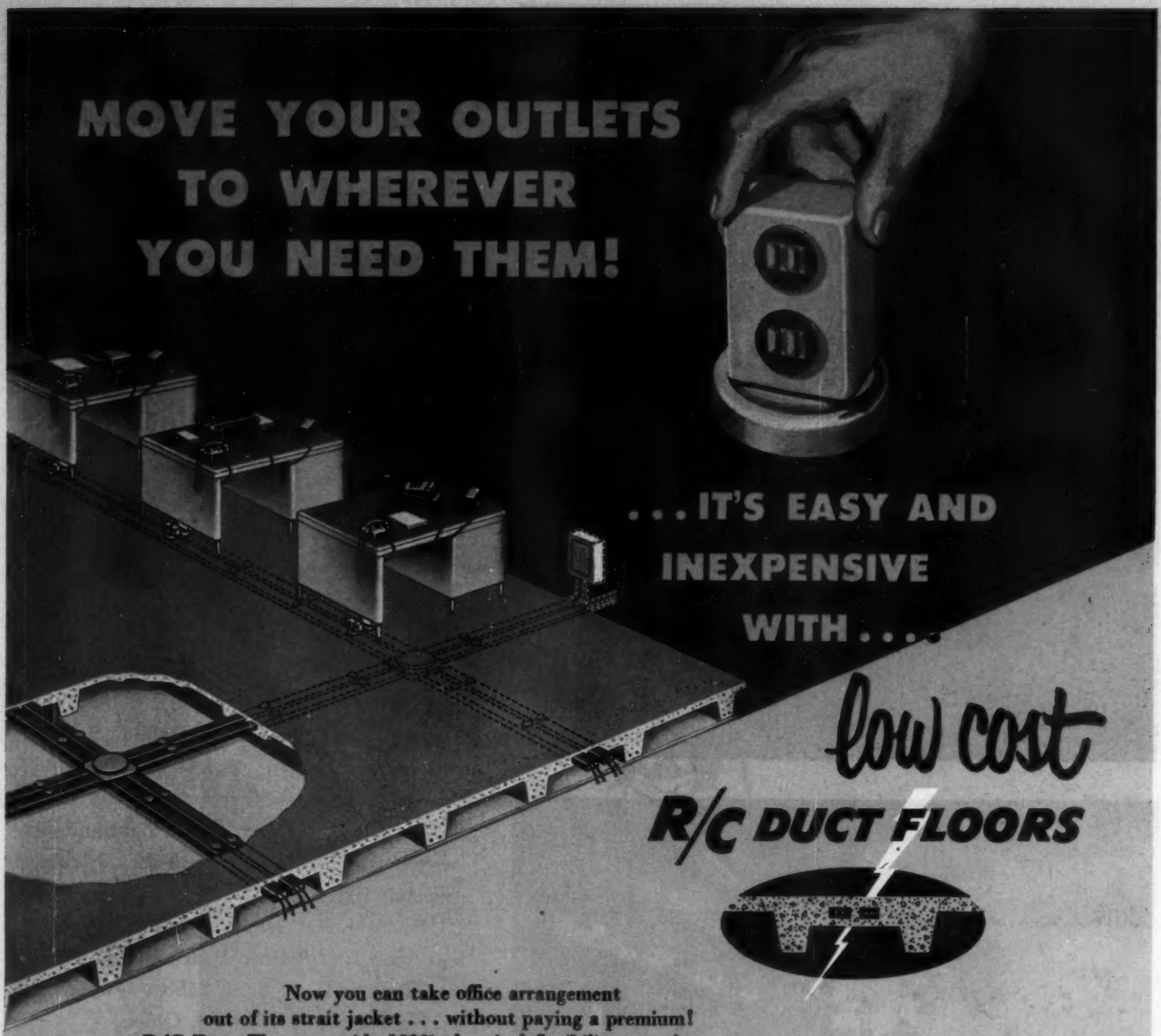
ARCHITECTS, ENGINEERS — The wide experience of local Fitzgibbons engineering representatives is always available for boiler sizing and other heating suggestions. Representatives are located in principal cities. For information on the nearest one, write Fitzgibbons Boiler Company, Inc., 101 Park Avenue, New York 17, N. Y.

SINCE 1886 MOST ECONOMICAL IN FUEL THE FITZGIBBONS BOILER 1886

The Fitzgibbons Boiler®

SBI

MOVE YOUR OUTLETS TO WHEREVER YOU NEED THEM!



. . . IT'S EASY AND INEXPENSIVE WITH . . . .

low cost R/C DUCT FLOORS

Now you can take office arrangement out of its strait jacket . . . without paying a premium! R/C Duct Floors provide 100% electrical flexibility to take care of any future rearrangements. Yet its original cost is about the same as a conventional wiring system of equal capacity. Outlets for power and communications systems can be connected to convenient risers in a matter of minutes. There is no ripping up or drilling through floors and ducts.

R/C Duct Floors consist of *standard* steel electrical distribution ducts set in the *structural* slab of reinforced concrete joist floors . . . *no expensive fill or topping is needed.* Meet all code requirements.

Average costs show that R/C Duct Floors cost 19% less than cellular steel floors! Before you design your next building, why not investigate R/C Duct Floors?

SEND FOR NEW 16-PAGE BULLETIN
Includes full details on design, costs, and technical specifications.

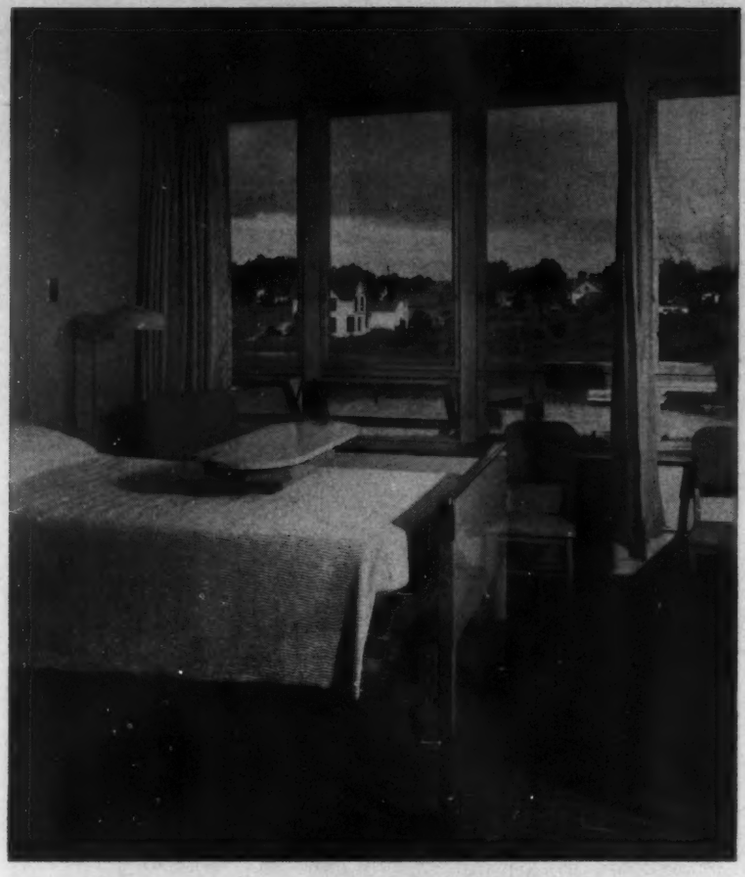


CONCRETE REINFORCING STEEL INSTITUTE
38 South Dearborn Street
Chicago 3, Illinois

ANOTHER R/C DUCT FLOOR JOB!



Ohio State Office Building, Columbus, Ohio





This is the new, 237-bed Rockford (Ill.) Memorial Hospital, equipped with 2,178 *Thermopane* units 30″ x 56″. Associated Architects-Engineers: Hubbard & Hyland, Rockford; Perkins & Will, Chicago.

WILL *Thermopane*® SAVE THIS NEW HOSPITAL $129,520?

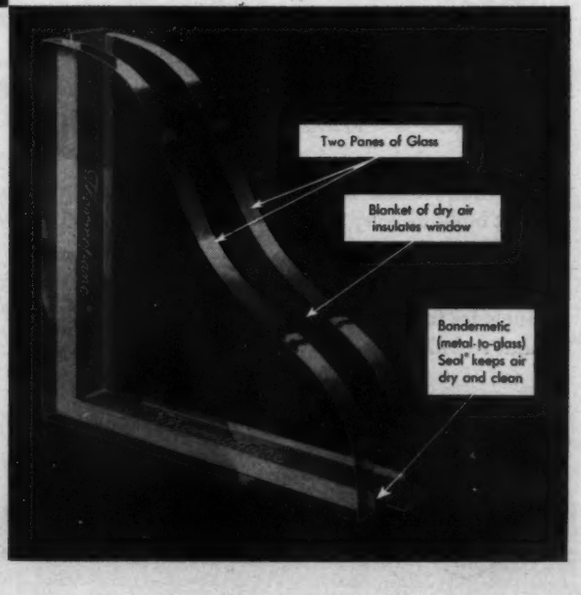
It will, if this hospital is in use as long as the 1883 building it replaced. Even in 20 years it will save approximately $43,200.

The architects figure that the 2,178 *Thermopane* insulating glass units in the windows saved $10,000 on the cost of heating equipment and will save $1,660 per year on fuel costs!

And think what *Thermopane* means to the *comfort* of patients. Each private room has 50 square feet of windows. Each double room has 100 square feet of windows. Each bed is only 4 feet from the glass.

And because of *Thermopane*, patients get all the pleasure of cheerful daylight and view —yet are comfortable even in the coldest weather!

For complete information on *Thermopane*, see your L·O·F Glass Distributor or Dealer, or write to Dept. 8595, Libbey·Owens·Ford Glass Company, Toledo 3, Ohio. *®



Thermopane®
INSULATING GLASS

LOF GLASS

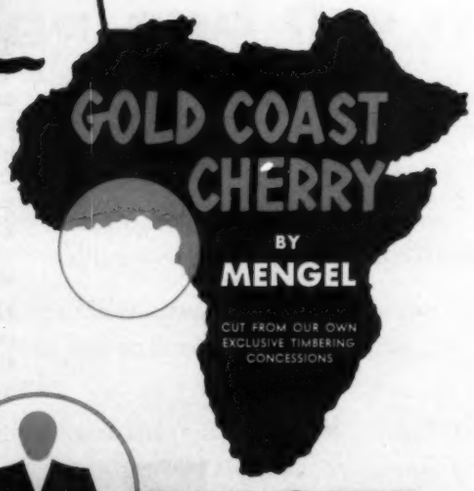
LIBBEY · OWENS · FORD
a Great Name in Glass

GOLD COAST CHERRY



Exciting... Exceptional... Exclusively **MENGEL!**





BUT *not* expensive — no, sir! Which is precisely why builders are actually excited about Mengel Doors in rotary-cut Gold Coast Cherry.

This newest addition to our extensive line has swept to exceptional popularity in but a few short months. Because with all its beauty, all its glamour — *it is actually priced lower than many domestic hardwoods!*

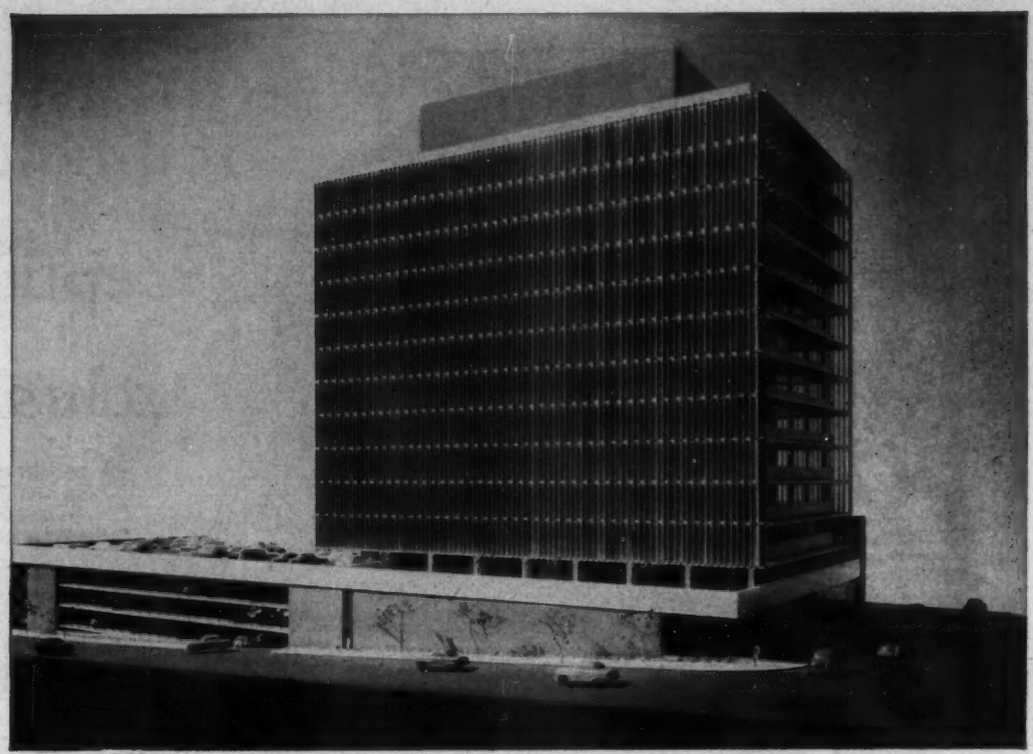
What's more, Mengel Doors of Gold Coast Cherry save you extra money in finishing. One finish coat on their satiny, close-textured surfaces is better than two coats on many other woods.

That's Mengel for you — better looks, better *value!* See for yourself: order an inspection lot from your distributor.

Door Department, THE MENGEL CO., *Louisville 1, Ky.*
World's Largest Manufacturer of Hardwood Products
(Mengel Permanized Furniture, Doors, Kitchen Cabinets, Wall Closets)

MENGEL *Flush* **DOORS**

3325 WILSHIRE BUILDING, *Los Angeles, California*
OWNER AND BUILDER: *Tishman Realty and Construction Co., Inc. New York and Los Angeles*
ARCHITECT: *Victor Gruen, A.I.A., Los Angeles, New York and Detroit*



serving the architect, and owner-builder
with metal wall engineering and production quality

This new 13-story office building will be completely air-conditioned. To admit maximum natural light without the discomfort of glare and direct sunlight, the building has been designed with projecting horizontal sunshades on the south and north elevation, and vertical louvers on the east and west elevation. The complete aluminum wall framing and vertical louvers will be Kawneer engineered and produced, saving the architect and builder months of time and giving them the assurance of client satisfaction. Special Kawneer weather-tightness plus expansion and contraction features will be included.

Have you a metal wall problem? Why not delegate the whole responsibility to Kawneer. Five plants in the United States and Canada, a complete engineering staff, and 50 years of experience in architectural metals are waiting to serve you.

Write for folder describing Kawneer services and metal wall jobs.

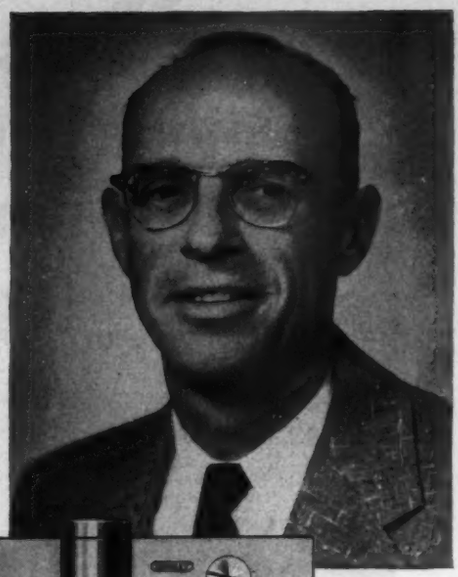


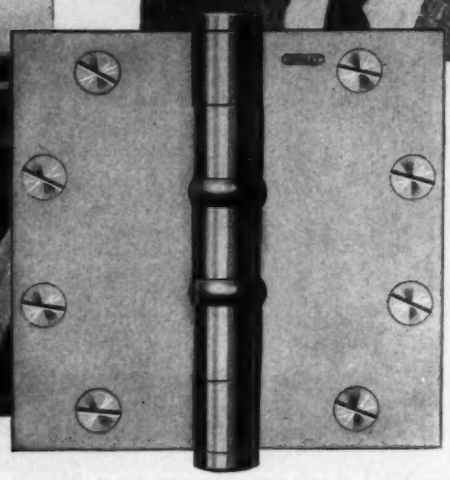
Kawneer
General Offices
NILES, MICHIGAN
ARCHITECTURAL PRODUCTS DIVISION



The El Paso Natural Gas Company
Architect: Carroll and Daeuble Builder: Robert E. McKee
Hardware furnished by Zork Hardware Co.

Harry D. Burton, A.H.C.





Stanley Ball Bearing Hinge — BB 193

The building, the hinge and the man

STANLEY

The Stanley Works • New Britain, Conn.

REMEMBER THREE HINGES TO A DOOR

This building is the home of a fast-growing company in one of the nation's fast-growing industries — natural gas.

This hinge swings doors on all 18 floors of this $5,000,000 building . . . medium weight doors in average frequency use.

This man was the Hardware Consultant for this building . . . working with the architects and owners on the hardware specifications.

The hardware consultant is an expert, a qualified advisor whose professional services are available to you. It is his job to know and to recommend the builders hardware that best satisfies your requirements. Use him. Work with him. Put his knowledge to work for you and your clients.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL • STEEL STRAPPING

CERTAIN-TEED FIRESTOP BESTWALL® IS FIRST GYPSUM WALLBOARD APPROVED FOR 1-HOUR FIRE-RESISTIVE REQUIREMENTS UNDER PHILADELPHIA'S BUILDING CODE



Architect's drawing of new Bishop Neumann High School, Philadelphia, Pa. Architects: Stickle & Associates, Cleveland and Philadelphia. General Contractor: James J. Clearkin, Philadelphia.



Architect George W. Stickle, who designed the new Bishop Neumann High School.

Firestop board specified to speed construction and reduce costs in new $1,925,000 Bishop Neumann High School

Previous experience with Firestop Bestwall in other areas was back of the architects' specifying this gypsum wallboard for the Bishop Neumann High School now under construction in Philadelphia. The Firestop board is being used in all classroom ceilings to furnish fire resistance. It will be finished with acoustical tile.

Architect Stickle tells why he used Firestop Bestwall Wallboard in the Bishop Neumann High School:

1. **It gives the 1-hour fire rating which is required by the City of Philadelphia and most building codes for buildings of this nature.**
2. **You get a much more uniform base for the acoustical tile and a more uniform material for fireproofing, as it must come ⅝" thick in all places.**
3. **Acoustical tile can be glued most successfully to Firestop Bestwall Wallboard.**
4. **It makes for a clean job.**
5. **It goes up fast and is economical to apply.**

Mr. Stickle concludes: "I believe that this material will be used in greater quantities as time goes on."

Firestop Bestwall was the first gypsum wallboard formulated to make 1-hour fire-resistive construction in single layer possible with no further treatment, over both wood and metal framing. Firestop is the first gypsum wallboard to be approved under the Philadelphia Building Code for 1-hour fire-resistive requirements over wood and in Type II buildings up to three stories. Firestop Wallboard meets F.H.A. and V.A. requirements and has been accepted under most municipal, State and county codes, and under the national model codes.

When 1-hour fire-resistive wall and ceiling construction is required, speed the job and reduce costs with Firestop Bestwall Gypsum Wallboard. Write for complete information.

Certain-teed

REG. U.S. PAT. OFF.

Quality made Certain . . . Satisfaction Guaranteed

Certain-teed BUILDING PRODUCTS

CERTAIN-TEED PRODUCTS CORPORATION

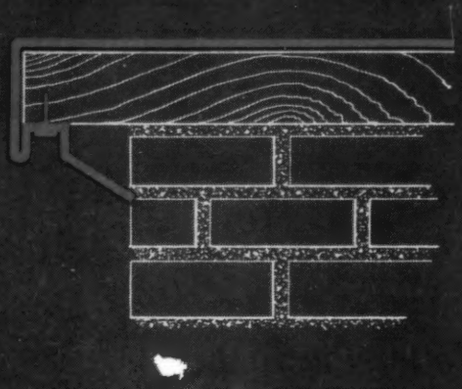
ARDMORE, PENNSYLVANIA

EXPORT DEPARTMENT: 100 EAST 42ND ST., NEW YORK 17, N.Y.

ASPHALT ROOFING • SHINGLES • SIDING • ASBESTOS CEMENT ROOFING AND SIDING SHINGLES
GYPSUM PLASTER • LATH • WALLBOARD • SHEATHING • ROOF DECKS
FIBERGLAS BUILDING INSULATION • ROOF INSULATION • SIDING CUSHION
PAINT PRODUCTS—ALKYD • LATEX • CASEIN • TEXTURE • PRIMER-SEALER

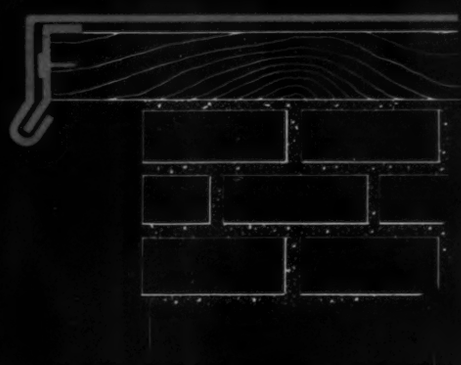
HOW WOULD YOU DO IT?

. . . this way?



COPING COVER DETAIL
Fig 1

. . or this way?



COPING COVER DETAIL
Fig 2

Fig. 1 detail illustrates a method of securing a metal coping cover to a wood plank on top of a masonry wall. The metal is fastened to the underside of the plank with copper nails spaced 12″ apart on both sides of the wall. The metal coping cover is made from 8′-0″ long sheets. The sheets are joined by locked and soldered seams except at every 32′-0″ a 2″ wide mastic-filled loose lock seam is installed.

In the Fig. 2 detail both side edges of the plank edge strips are secured by copper nails. The metal coping cover is hooked over the edge strips to form a ¾″ loose lock seam as shown. The metal coping cover is made from 8′-0″ long sheets and all sheets are joined by locked and soldered seams except at every 32′-0″ a 2″ wide mastic-filled loose lock *joint* is installed.

When the metal is secured to the plank as shown in Fig. 1, movement is restricted which will cause the metal coping to wave and buckle. The nails will in time become loose so the nail heads will protrude ¼″ or more from the metal. The soldered cross seams may also crack because of the restriction of movement. When each sheet is firmly secured along both side edges the loose lock mastic-filled seam will not function as an expansion joint. Continuous edge strips should be attached to the side edges of the plank as shown in Fig. 2 to provide a track over which the covering can slide.

Accumulated expansion and contraction movement can then be transferred to the loose lock expansion joint.

We do not wish to presume to tell you how to design your structures or dictate their construction. For there are many satisfactory methods of installing gutters, leaders, roofs, flashing, coping covers, etc., which, of necessity, change with the design and type of construction and materials used. The purpose of this advertisement is to point out the methods of installation that have been proved by many years of use, and backed by more than a century and a half of experience in working with copper, to be the most satisfactory techniques. You will find these methods in Revere's 110 page brochure, "COPPER AND COMMON SENSE." Send for a copy today. And remember: Revere has a staff of specialists known as Technical Advisors, whose experience qualifies them to render valuable service and advice regarding the use of metals in the building field. Feel free to consult with them at all times regarding the use of Revere Copper; you incur no obligation. Revere Technical Advisors may be contacted through the Revere Office nearest you.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801
230 Park Avenue, New York 17, N. Y.

• • •

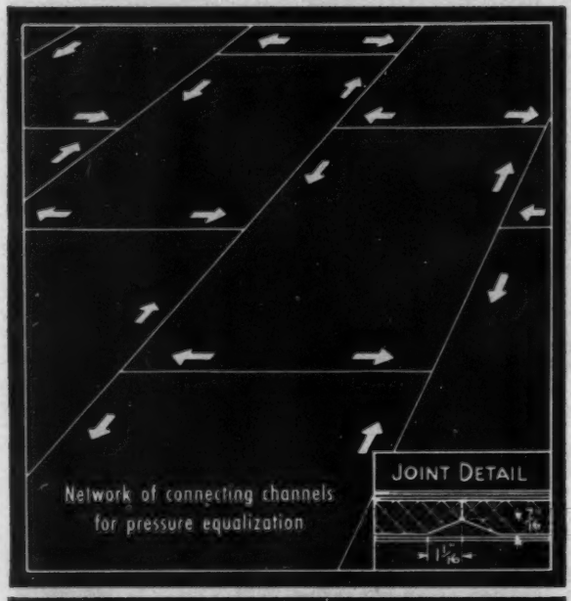
Mills: Baltimore, Md.; Brooklyn, N. Y.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Newport, Ark.; Rome, N. Y.
Sales Offices in Principal Cities, Distributors Everywhere

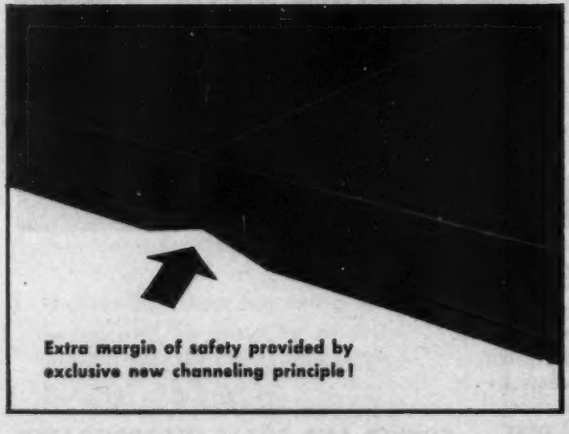




Firestone Tire and Rubber Co., Office and Warehouse Building, 2706 W. 79th Street, Chicago, Illinois. Architect specified 1" Celotex Channel-Seal Roof Insulation (168,000 sq. ft.) **Architects and Engineers:** Firestone's Own Real Estate Dept., Akron, O. **General Contractor:** Algot B. Larson, Inc., 3837 W. Lake St., Chicago, Illinois. **Roofing Contractor:** Hans Rosenow Roofing Co., 5854 North Northwest Highway, Chicago, Illinois.

Roof of huge new Firestone warehouse insulated with Celotex CHANNEL-SEAL





...the roof insulation that guards against blistering and separation of felt from insulation

When Celotex Channel-Seal Roof Insulation is laid, it forms a network of interconnecting channels. Through these channels, exclusive with Celotex, equalization of air pressure is achieved throughout the roof area. Thus the risk of blistering and separation of felt from insulation is effectively minimized. This is why Celotex Channel-Seal provides *cost-saving protection no ordinary roof insulation can offer!*

High Insulation Value

Celotex Channel-Seal is made of a special low-density board of high insulating efficiency; each piece has bevels 7/16" high by 1 1/16" wide on all bottom edges, which join to form the channels. It's asphalt-coated on both sides and all edges for extra moisture-protection in storage and on the job. Available in a range of thicknesses to meet specific job requirements.

Applied Quickly at Low Cost

Channel-Seal is rigid, tough, yet light and easy to handle, low in both initial and applied cost. Stands rough handling, and heavy job traffic. Smooth surface assures positive bond to both roof deck and roofing felt. Celotex is the only roof insulation made of durable, interlocking long Louisiana cane fibers, protected by the exclusive Ferox® Process against dry rot and termite attack.

For a better roof... specify genuine **CELOTEX** REG. U. S. PAT. OFF. **ROOF INSULATION**

THE CELOTEX CORPORATION • 120 S. LA SALLE ST. • CHICAGO 3, ILL.

When the pressure's on...

*TURQUOISE

can take it!



Thanks to 100% "*Electronic" Graphite and Super Bonded Construction



The lead won't snap within the wood. By Eagle's patented Super Bonding process, lead and wood are inseparably welded to combine their strength against breakage.

The needle point is stronger, too. Eagle's exclusive "Electronic" graphite, ground to 1/25,000th of an inch, eliminates weak spots in the lead itself, and the point stands up for long lines of uniform thickness.

"Electronic" graphite sets a new standard for *smoothness,* too. Turquoise has no hard, scratchy spots that change your line or tear the paper... and its *dense* lead structure gives greater durability, blackness, and the opacity you need for sharp reproduction.

It's worth a try! Send for free samples of Eagle Turquoise Drawing Pencils in the degrees you wish. Please name this publication and your regular dealer.

EAGLE PENCIL COMPANY

NEW YORK • LONDON • TORONTO • MEXICO • SYDNEY

*®

You can save $100 on every door!

Multiply the number of door openings in your next building by $100, and this quick arithmetic will give you the total savings you can realize with Fenestra* Door-Frame-Hardware units. These big savings are possible because of a new concept in the building and installing of doors.

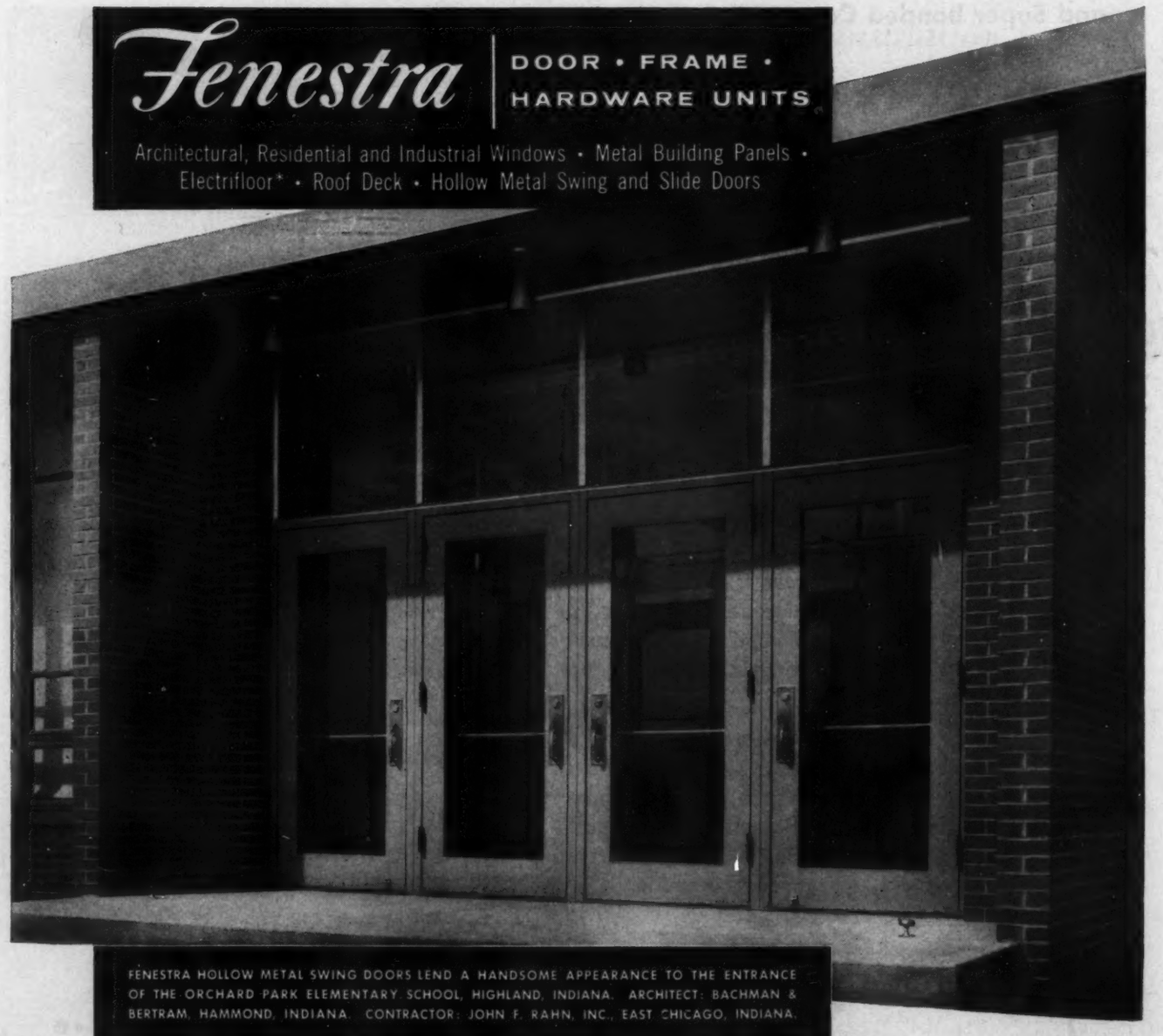
Pre-fitted doors, frames and hardware specifically made for each other are built by Fenestra on a production-line basis. So you enjoy mass production costs—not custom job costs. By the same token, when these complete units arrive on the job, there's no need for planning, ordering and assembling special elements. The doors are installed in *minutes* because the complete units need no cutting, fitting, mortising or tapping. Yet your savings don't end there. Maintenance costs are practically eliminated because Fenestra Hollow Metal Doors can't warp, swell, stick or splinter. They always open easily, smoothly. They close quietly because inside surfaces are covered with sound-deadening material.

You'll find a door for every purpose in the Fenestra line: Entrance Doors, Flush or Regular Interior Doors with glass or metal panels. Doors with the Underwriters' B Label. For photos and details call your Fenestra Representative, listed in the yellow pages of your phone book. Or write the Detroit Steel Products Company, Dept. AR-9, 2252 East Grand Blvd., Detroit 11, Mich.

*®

Fenestra | DOOR • FRAME • HARDWARE UNITS

Architectural, Residential and Industrial Windows • Metal Building Panels • Electrifloor* • Roof Deck • Hollow Metal Swing and Slide Doors



FENESTRA HOLLOW METAL SWING DOORS LEND A HANDSOME APPEARANCE TO THE ENTRANCE OF THE ORCHARD PARK ELEMENTARY SCHOOL, HIGHLAND, INDIANA. ARCHITECT: BACHMAN & BERTRAM, HAMMOND, INDIANA. CONTRACTOR: JOHN F. RAHN, INC., EAST CHICAGO, INDIANA.



The shingles illustrated here are Peacock Blue. Other available colors are: Lindenwold, Antique Red, Green Pastel, Red Pastel, and Rustic Brown.

Colorful roofs make satisfied clients!

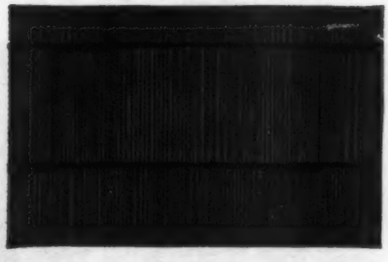
SPECIFY K&M "DUALAY" ROOFING SHINGLES

Plan colorful shingles for the roof, and watch your client's eyes light up. Any of the six "Dualay" colors—like the one pictured above—makes a roof smart and attractive. Home owners also appreciate the rugged, long-lasting quality of these shingles.

Ahead in features. K&M "Dualay" Roofing Shingles are remarkably durable. Made of asbestos fiber and portland cement, they offer lifetime roofing protection. They won't burn or rot; in fact, they become harder with age. And because they're "anchored" in place, they're especially wind-resistant. Self-aligning "Dualay" shingles are easy to apply.

Details in Sweet's Files. See Sweet's Architectural Files for additional information on K&M Roofing Shingles. While you're looking them up, check into K&M Siding Shingles—also made with modern color appeal.

Folder sent on request. K&M will gladly send a full-color folder showing these shingles in "matched" colors, and giving other valuable information. Write today.



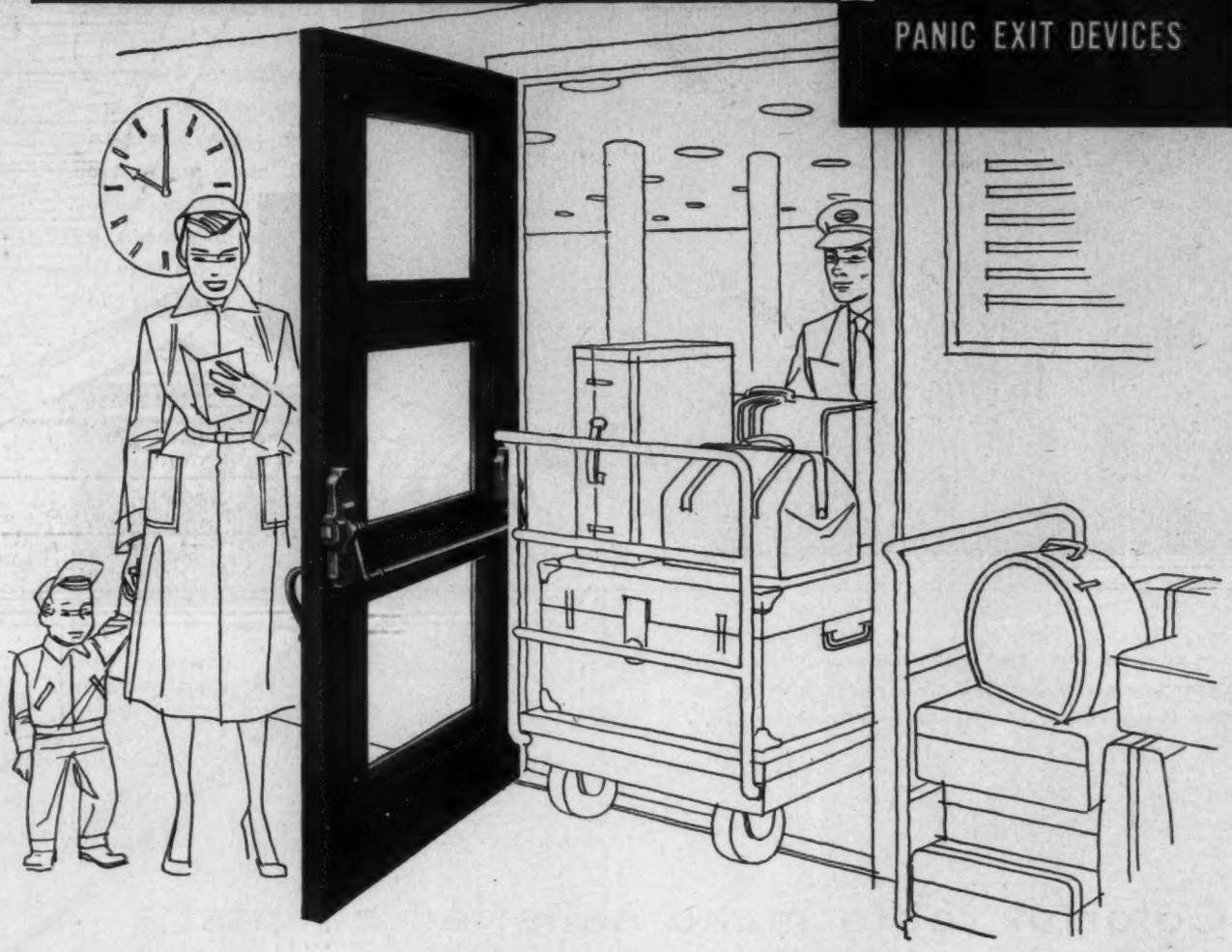
Can be laid up two ways— with either straight butt or thatched. Straight butt effect of "Dualay" shingles is pictured here; thatched butt effect is shown in upper illustration.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

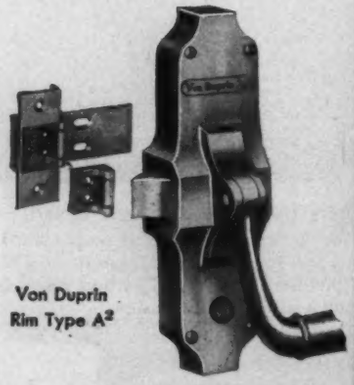
K&M best in asbestos®

Von Duprin

FIRE AND
PANIC EXIT DEVICES



Rugged . . . Reliable . . . Recommended



Von Duprin
Rim Type A²

● You never have to worry about sure and instant service with Von Duprin exit devices on the job! These rugged devices defy the rough wear of daily traffic in all types of buildings. In fact, an impressive number of devices have been in service more than 40 years . . . with minimum maintenance! This is testimony to rigid Von Duprin standards in engineering, materials and craftsmanship —the reason so many architects, builders and distributors recommend Von Duprin. These exit devices insure a smooth flow of daily traffic and stand ready to provide "the safe way out" for the once-in-a-lifetime emergency.

VONNEGUT HARDWARE CO. • VON DUPRIN DIVISION • 402 W. MARYLAND ST. • INDIANAPOLIS 9, INDIANA



Photo by Carl Ullrich

Flooring in the Chicago showroom of Whirlpool Corporation (Alfred T. Kurek & Associates, architects) is "Vinylast" tile made by **Vinyl Plastics, Inc.**, Sheboygan, Wisc.

For beauty plus heavy duty

specify flooring made of BAKELITE Vinyl Resins

Whether for a busy showroom or a bustling breakfast bar, specify flooring made of BAKELITE Brand Vinyl Resins if you wish *lasting floor beauty* despite extra heavy traffic.

The tough resins provide this type of flooring with superior wear resistance . . . maintaining bright beauty unmarred by unsightly scars from millions of footsteps.

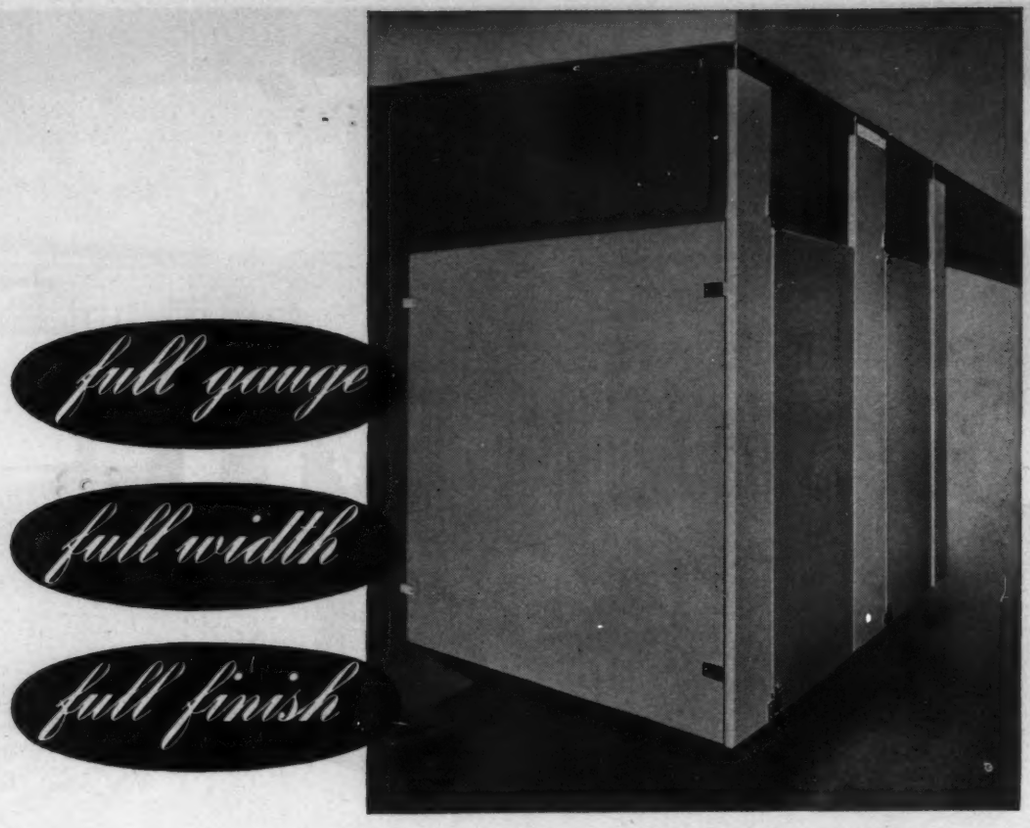
Soil is kept out . . . making cleaning a quick and easy matter. And, this flooring resists foods, acids, alkalies, alcohol and most chemicals, cleaners, oil and grease.

Be sure the attractiveness you plan will stay the way you planned it. Specify flooring made of BAKELITE Vinyl Resins.

BAKELITE
BRAND
Vinyl Resins

BAKELITE COMPANY, *A Division of Union Carbide and Carbon Corporation* UCC 30 East 42nd Street, New York 17, N. Y.

The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC



Nicholson Type AC Toilet Compartment. Ceiling hung. Ultra-modern. Sanitary.

Nicholson Metal Partitions

better built . . . for lasting service

Only time will tell . . . whether or not the average toilet compartment will deliver long life and real serviceability. But Nicholson compartments give you "full" assurance right from the start—full gauge metals . . . full width partitions . . . full final finish. Nicholsons' are built to stand up and still stand out . . . even after years of steady service.

- **heavier gauge steel:** panels—full 20 gauge
  pilasters—full 16 gauge
  headrail and tubing—full 16 gauge
  stainless steel plinth—full 20 gauge
- **thicker partitions:** doors and panels—full 1" thick
  pilasters—full 1¼" thick
- **extra protective coats:** galvanized, bonderized coatings
  zinc chromate primer
  2 coats of synthetic baked enamel

Specify *for lasting service.* Specify Nicholson.

Available in the following types—and wide selection of colors:

Type A—floor braced
Type AR—overhead braced
Type B—flush type
Type AC—ceiling hung
Type ARP—panel type
Type BP—panel type

NICHOLSON

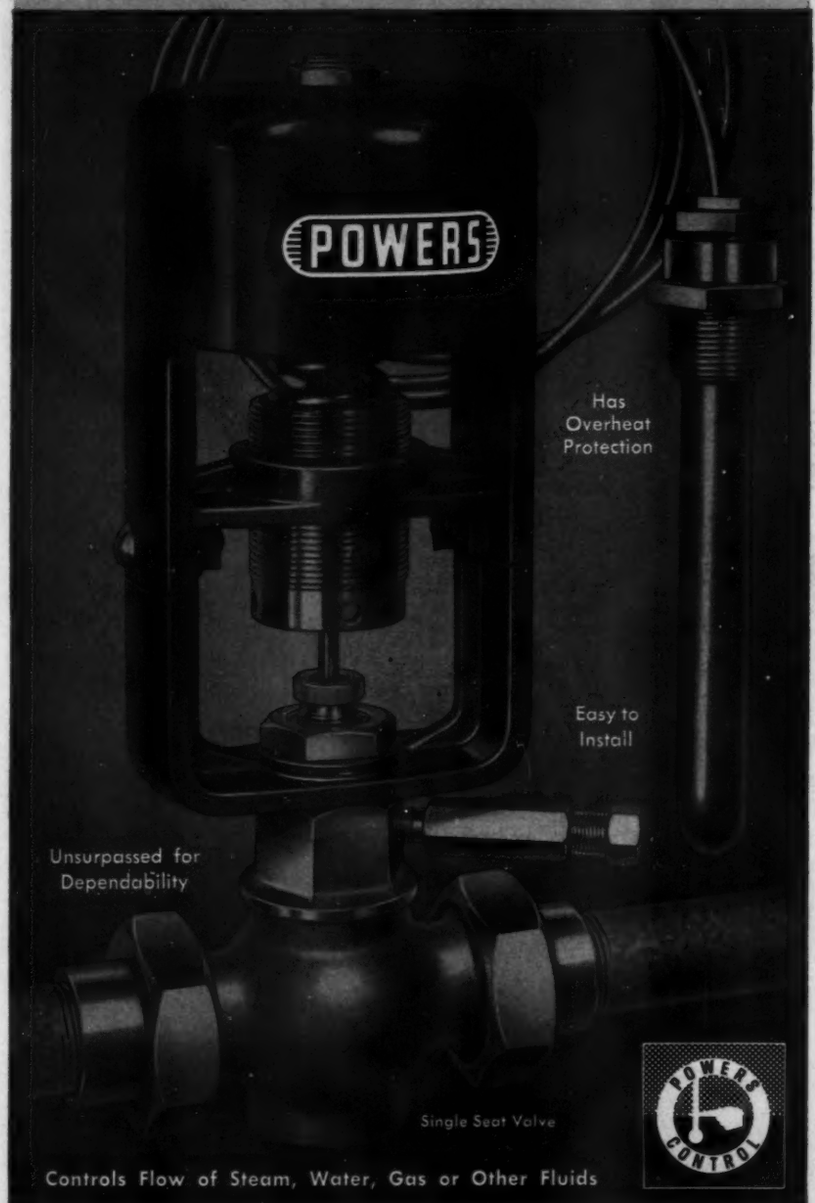
W. H. NICHOLSON and Company

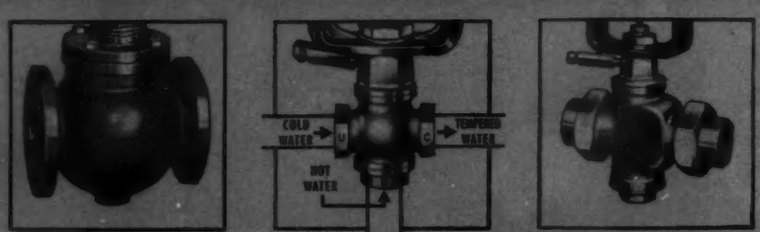
METAL PARTITIONS • TRAPS • VALVES • FLOATS

14 OREGON STREET, WILKES-BARRE, PA. • SALES AND ENGINEERING OFFICES IN 50 PRINCIPAL CITIES

POWERS No. 11 Self-Operating TEMPERATURE REGULATOR

Automatically holds temperature constant at the right point. Prevents losses caused by wasteful OVER-heating.

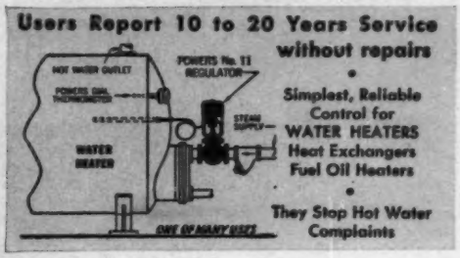




Various Valve Bodies and Inner Valves are available. Single and Double Seat Valves thru 2" have rugged bronze bodies with bronze union connections for quick, easy installation. Bulletin 329 gives information about all types.

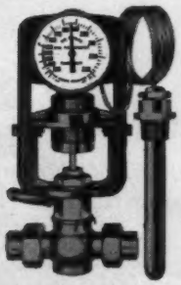
(c282)

Why It Gives BETTER CONTROL and Saves More Money



ONLY POWERS No. 11 REGULATOR Offers ALL These Advantages

- **Simple, sturdy construction.** Materials used are corrosion resistant.
- **Powers bellows has 50% more power** than used in the majority of regulators. The heart of a self operating regulator is its bellows. Powers with its 50% greater effective area gives better control and its durable 2 ply bellows outlasts ordinary single ply bellows.
- **Valve stem lubricator** with silicone grease aids easy movement of highly polished stainless steel valve stem and reduces drying out of packing.
- **BETTER CONTROL** results from Powers powerful bellows and minimum of valve stem friction.
- **60°F. temperature ranges** available with accuracy of ±1°F. on some processes and 2 to 3°F. on others.
- **Rugged bronze valve bodies with bronze union connections,** for single and double seat valves thru 2", reduce installation time and labor. Larger sizes have flanged iron body valves.
- **Powers Nationwide Service and 24 Hour Delivery** in the U.S.A. are important time and money saving advantages.



- **Indicating Regulator** with easy to read 4" dial thermometer helps adjust the regulator and check temperature at the bulb. Various dials and ranges are available.

Right type and size of valve is important for good control. May we help you make the right selection? Benefit from POWERS more than 60 years experience with self-operating regulators.

Call our nearest office or write us direct for Bulletin 329.

THE POWERS REGULATOR CO.

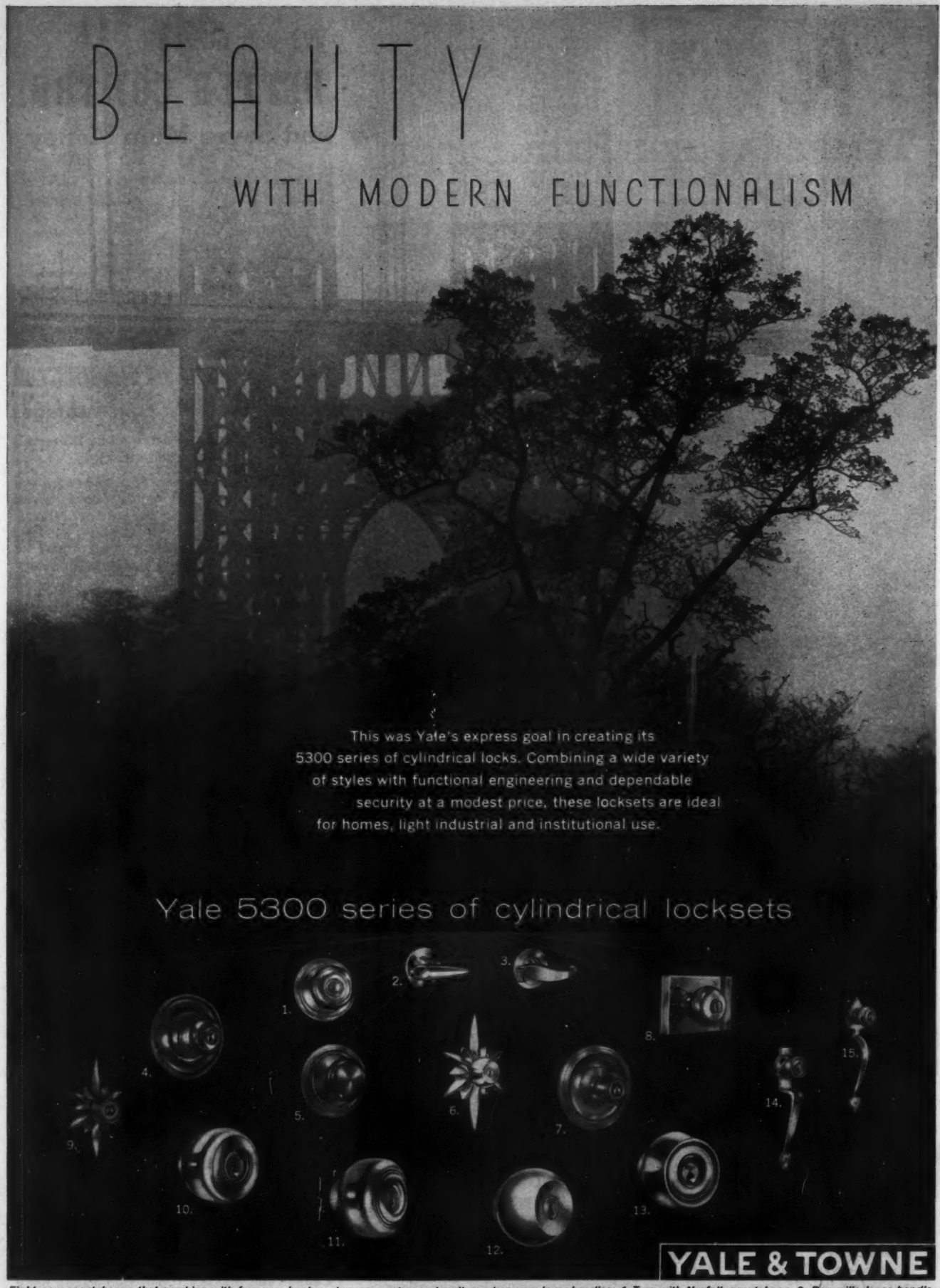
Skokie, Ill. | Offices in Chief Cities in U.S.A. Canada and Mexico | See your phone book

Automatic Temperature and Humidity Control

Established 1891

BEAUTY

WITH MODERN FUNCTIONALISM



This was Yale's express goal in creating its 5300 series of cylindrical locks. Combining a wide variety of styles with functional engineering and dependable security at a modest price, these locksets are ideal for homes, light industrial and institutional use.

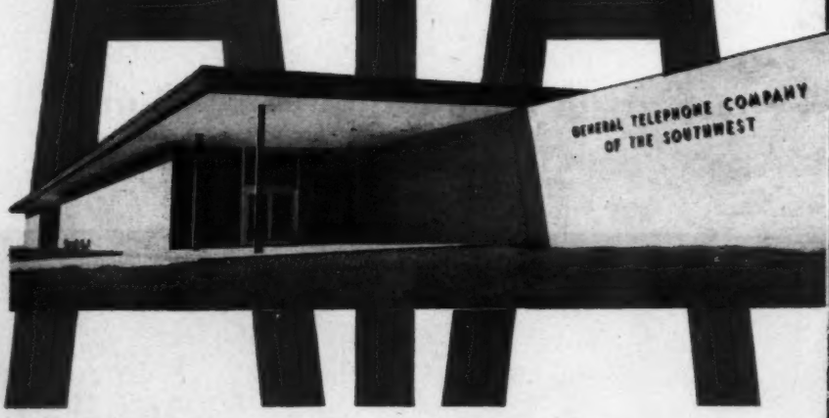
Yale 5300 series of cylindrical locksets

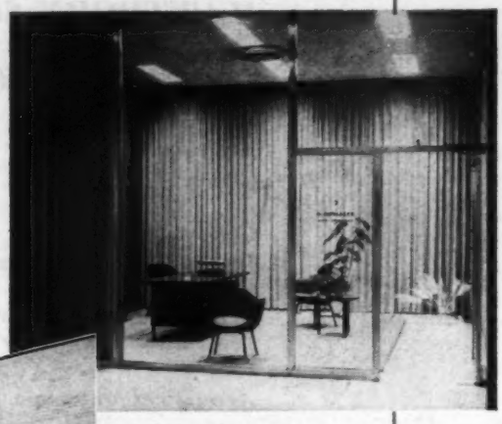
YALE & TOWNE

Eight new escutcheons that combine with four new knobs... two new entrance handles... two new lever handles: 1. Troy with Norfolk escutcheon. 2. Deauville lever handle. 3. Guilford lever handle. 4. Troy with Madison escutcheon. 5. Litchfield with Savoy escutcheon. 6. Classic with Dallas escutcheon. 7. Nassau with Newport escutcheon. 8. Litchfield with Williamsburg escutcheon. 9. Nassau with Constellation escutcheon. 10. Litchfield knob. 11. Troy knob. 12. Classic knob. 13. Nassau knob. 14. Arlington entrance handle. 15. Westbrook entrance handle. Send for FREE full-color catalog. THE YALE & TOWNE MFG. CO., LOCK & HARDWARE DIV., WHITE PLAINS, N. Y. YALE, REG. U. S. PAT. OFF.

AIA

honor award building







kno-draft air diffusers

Architect: PACE Associates
General Contractor: Evans & Taylor
Mechanical Contractor: Bollinger & Sames

ONE of the five First Honor Awards in the American Institute of Architects' 7th Annual Competition for Outstanding American Architecture goes this year to the office building of the General Telephone Company of the Southwest, San Angelo, Texas.

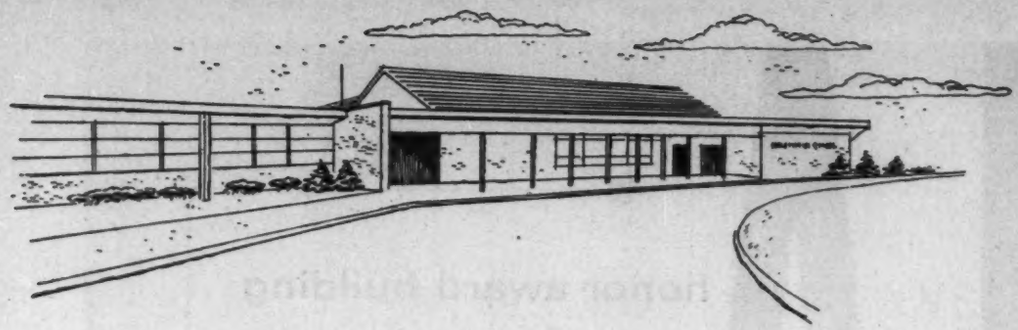
Fittingly, the job of distributing air throughout the building has been entrusted to Kno-Draft Adjustable Air Diffusers.

In Kno-Draft you have true functional beauty—clean, simple lines in spun aluminum, handsome in its own right or when painted to blend into the ceiling—combined with a high diffusion efficiency that means ideal comfort.

And with Kno-Draft, the volume and pattern of air flow can be accurately adjusted *after* installation—assuring *uniform temperature without drafts* throughout the area and saving a lot of preliminary slide-rule figuring.

There are round, square and slot-type Kno-Draft Air Diffusers to meet all architectural requirements. For complete specifications, send for the Kno-Draft Data Book. Connor Engineering Corporation, Dept. E-95, Danbury, Connecticut.

CONNOR
kno·draft®
adjustable air diffusers



HAWTHORN SCHOOL,

Massapequa Park, New York

Architect:
George J. Dippel

General Contractor:
Joseph Bisceglia & Sons, Inc.

Acoustical Contractor:
Donaldson Acoustics Co.

Acoustical Material:
Cushiontone Full Random



Fast installation is one of the many advantages that makes Cushiontone a natural choice when large areas must be sound conditioned economically. Cushiontone goes up easily by conventional nailing, stapling, cementing, or mechanical suspension methods.



Maintenance is easy, for Cushiontone can be washed or repainted whenever desired without losing its acoustical effectiveness. Cushiontone's two-coat, white latex paint finish has high light reflectivity—helps diffuse light evenly without glare.

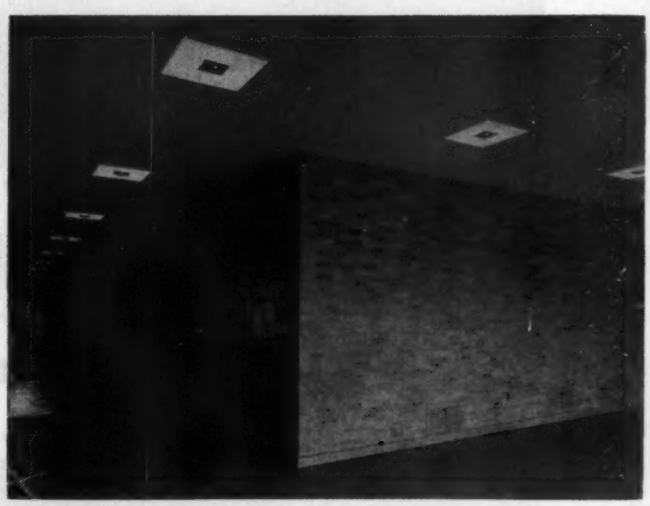
Sound conditioning adds distinctive atmosphere to "budget" school

Although limited by a tight budget, the architect for the new Hawthorn School in Massapequa Park, N. Y., has given it both modern, functional facilities and a non-institutional atmosphere.

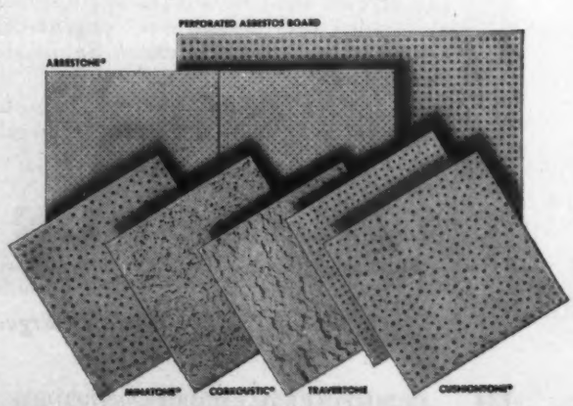
To keep building costs down, architect Dippel made effective use of brick veneer and frame construction. Low fire insurance rates were obtained by using fire walls to separate the school into small sections.

Noise-absorbing ceilings of Armstrong Cushiontone® give the school all the benefits of quiet at a remarkably low cost. A perforated wood fiber material, Cushiontone soaks up as much as 75% of the noise that strikes it. Its exclusive Full Random pattern of holes and extra narrow bevels practically eliminate the old-fashioned tiled ceiling effect. And the Cushiontone in the lobby has been repainted a bright yellow to add inviting warmth to the colorful school décor.

Get full information on Cushiontone and the complete line of Armstrong sound-conditioning materials from your Armstrong acoustical contractor. With a wide range of special product features to select from, you'll find one of these materials best meets the requirements of every job. For your free copy of the new 1955 edition of "Armstrong Acoustical Materials," write Armstrong Cork Company, 4209 Rock Street, Lancaster, Pennsylvania.



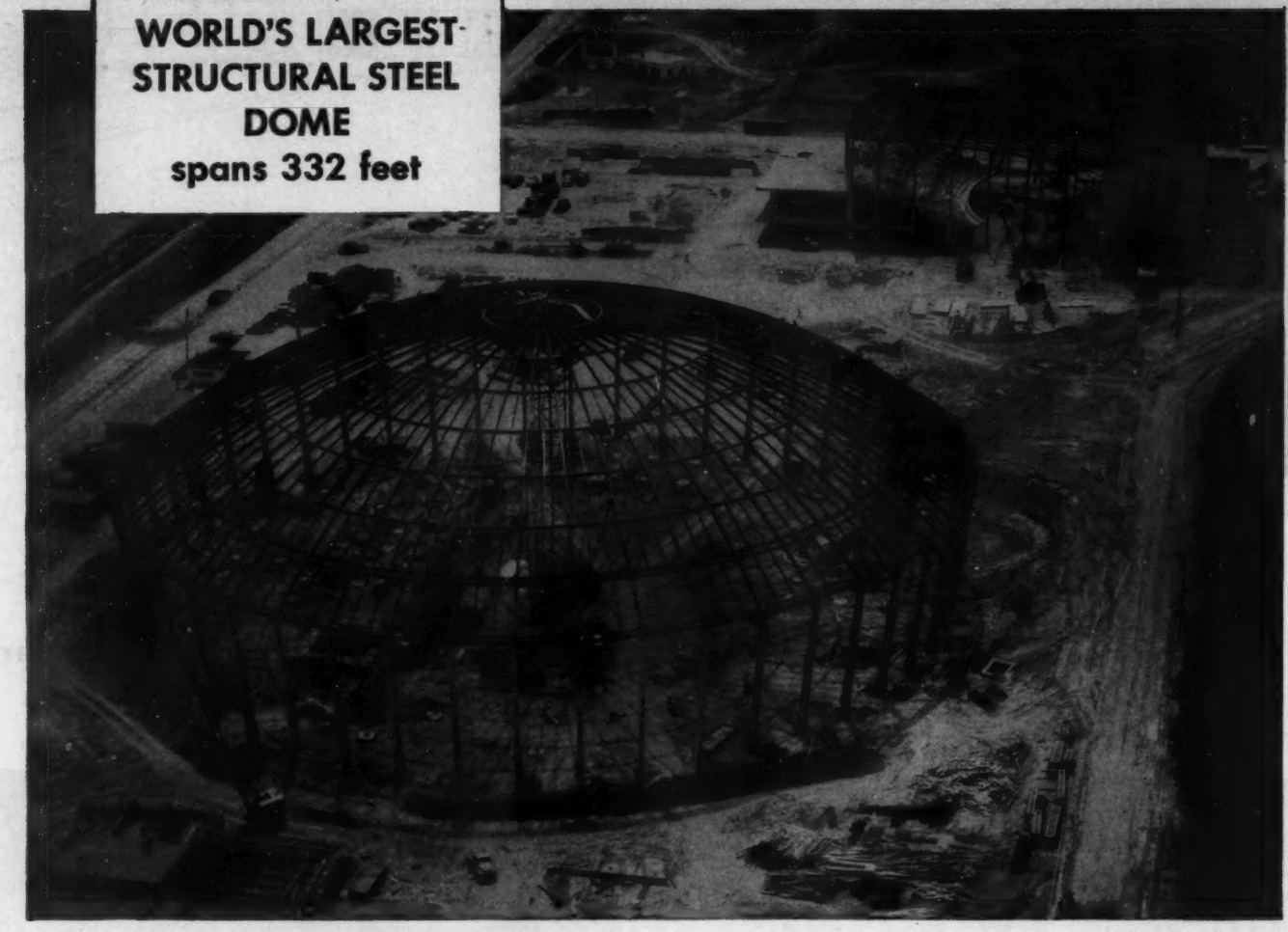
An efficient noise muffler, as well as an attractive ceiling material, Cushiontone absorbs up to 75% of the sounds that strike it. Noise, bouncing off the hard-surfaced walls and floors, has no chance to build up to disturbing levels.



Armstrong ACOUSTICAL MATERIALS

At Charlotte, N. C.

WORLD'S LARGEST STRUCTURAL STEEL DOME spans 332 feet



WELDED DESIGN BUILDS IT SIMPLER,

. . . at lower cost

CONSIDERED the world's largest structural steel dome, the $4,750,000 Coliseum at Charlotte, North Carolina, spans 332 feet, rises 112 feet above street level. Designed for welding, the round shape provides the greatest useable area for the perimeter, with maximum economy in construction.

An all-welded steel tension ring, 32" x 2½" and 332 feet in diameter, absorbs high tensile stresses from the thrust of the dome. Main radial ribs for the dome are 18 in. WF beams made up of seven 22 ft. 6 in. sections. The main ribs are assembled on the site by welding, erected and field-welded in place using Lincoln "Fleetweld 5" electrodes and "Shield-Arc" engine-driven arc welders. Fabricators and Erectors: Southern Engineering Company, Charlotte, North Carolina.

Facts on structural design are available to designers and structural engineers in Lincoln Studies in Structural Arc Welding. Write



Dependable Welding at Low Cost *is why Lincoln "Fleetweld 5 (E-6010)" is preferred on more construction than any other electrode.*

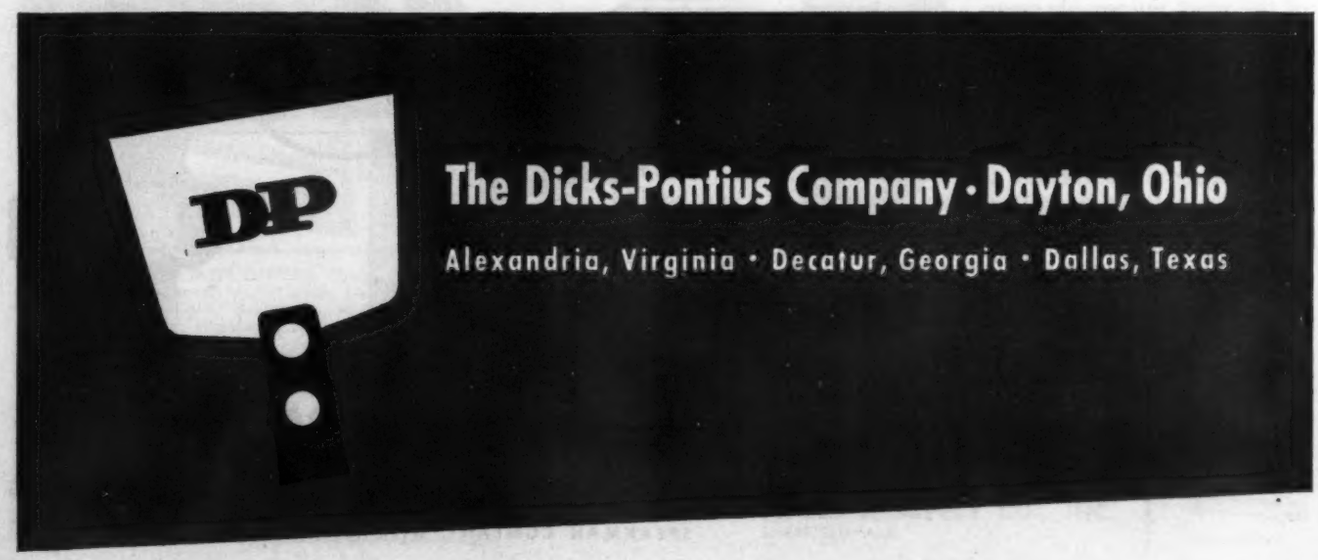
THE LINCOLN ELECTRIC COMPANY

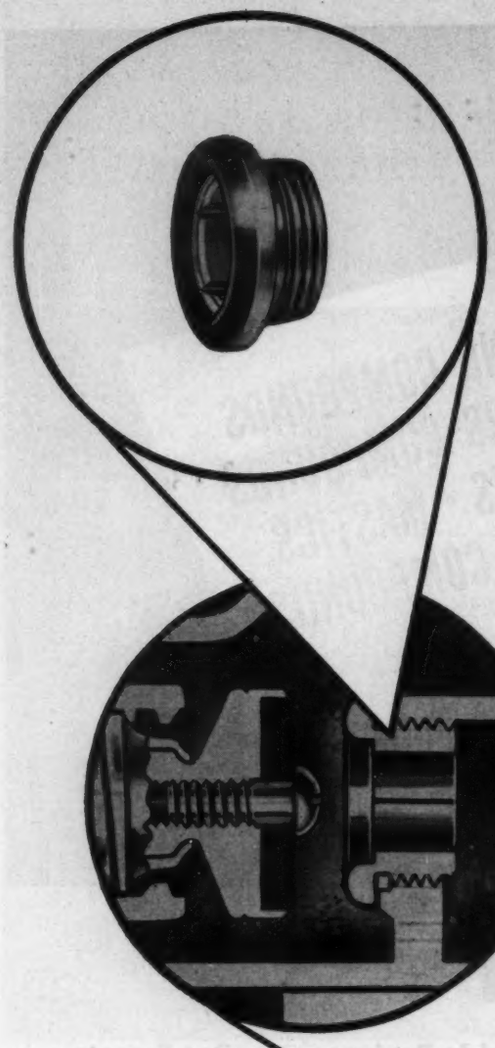
Dept. 2602 • Cleveland 17, Ohio

The World's Largest Manufacturer of Arc Welding Equipment



Always specify D-P for Dependable Performance. See Sweets Architectural File $\frac{6C}{Di}$ for complete product descriptions and specifications—or write to us for your personal copy of our catalog.





It's what's inside that makes the difference . . .

MONEL VALVE SEAT

This *Monel* Renewable Valve Seat is just one of the precision-built *Monel* parts which distinguish every Speakman COMMANDER Valve.

Speakman *Monel* Valve Seats resist water corrosion indefinitely. And wear on Speakman Valve Seats is minimized through the use of the swivel disc principle.

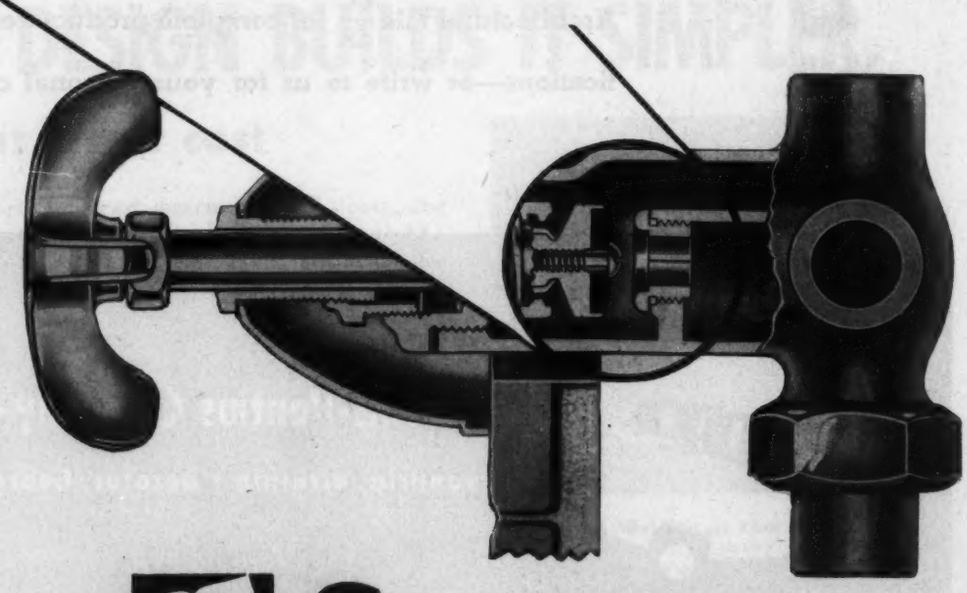
Monel Valve Seats, *Monel* Washer-Retaining Screws, *Monel* Swivel Discs, all precision-machined, are typical of the construction of Speakman COMMANDER Line products. They also help explain why the Speakman Company never has been called upon to replace a complete COMMANDER Shower or Fixture Fitting because it wore out.

Write today for information on the Speakman COMMANDER Line. See for yourself why architects and engineers specify "Speakman COMMANDER" when they want dependable performance, distinctive design, sensible price.

Remember, our reputation is *built* by the products we make, your reputation is *protected* by the products you specify.

Why is this Monel Valve Seat Different?

Because the valve seat is one of the most vulnerable wearing parts in any valve, in the Speakman COMMANDER Valve it is machined of heavy, durable, non-corrosive *Monel*. Note the Hi-Seat construction which raises the valve seat to give an unrestricted waterway area and positive seating action.



SEE OUR CATALOG IN SWEET'S

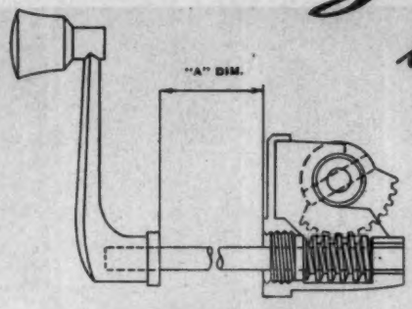
SPEAKMAN

COMMANDER SHOWERS AND PLUMBING FIXTURE FITTINGS

SPEAKMAN COMPANY, WILMINGTON 99, DELAWARE

STRIP-PROOF, WEAR-PROOF OPERATION

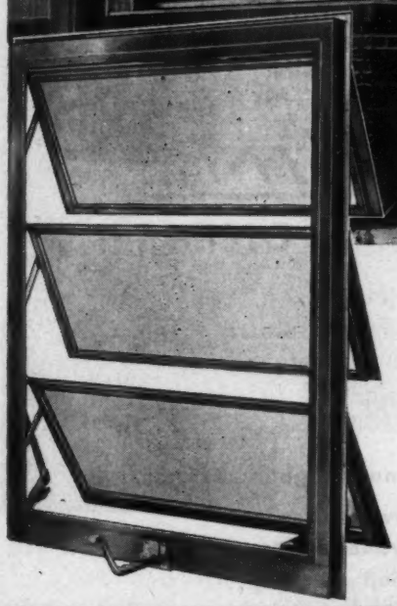
influences Architect in choosing Ualco!



SOUTHERN SASH'S Ualco aluminum

AWNING WINDOWS





Building:	Office, Memphis Stone & Gravel Company Memphis, Tenn.
Architect:	Robert Day Smith

Designing with a free hand for his brother, Mr. C. D. Smith, Architect Robert Day Smith chose the Ualco Aluminum Awning Window in preference to all others, for its strip-proof, wear-proof operation.

In the Ualco Awning, power is transmitted from an exclusive Strip-proof Operator (no separate locking device) through a torsion rod, encased in four pillow block oilite bearings, to the roller operating linkage with movable bars and lugs that engage weatherseal hooks.

Thus possibility of strain is eliminated. The Ualco Awning requires no adjustments; there's no wear; it's maintenance-free!

OTHER FEATURES: Extra heavy extruded aluminum sections have tremendous strength. Completely weatherstripped with Koroseal. Vents open up to 90 degrees . or lower vent only opens slightly for night and inclement weather ventilation while upper vents remain closed and locked. Integral fin takes brick fin and fin trim. Jiffy Quick Sill Clips slide in channel from each side.

SOUTHERN SASH SALES & SUPPLY CO., INC.
SHEFFIELD, ALA.

WAREHOUSES & SALES OFFICES: Canton, Ohio; Elizabeth, N. J.; Florence, Ala.; Hialeah, Fla.; Montgomery, Ala.; Van Nuys, Calif.; Greensboro, N. C.; Ruston, La.; Kansas City, Mo.; Washington, D. C.

ENGINEERING PLANNING SERVICE to assist architects, engineers and contractors in making "take-offs" and solving window problems.

See our catalog in Sweet's for complete information Architectural File 16A or Light Construction File 5A
U UN

SOUTHERN SASH'S Ualco World's Largest—In More Buildings Than Any Other Aluminum Window

Ualco Aluminum Windows are unconditionally guaranteed against defective materials and workmanship.

THE COMPLETE LINE



Blend It...
Hide It...
Combine It...



Installed as a continuous strip in window head or sill (as above), AGITAIR STRIPLINE is the only practical means for air curtaining plate glass windows or wall areas to counteract summer heat or winter chill.

AGITAIR® STRIPLINE DIFFUSERS

BLEND IT . . . specify AGITAIR STRIPLINE as a continuous decorative unit, or in sections to meet any requirements of interior treatment.

HIDE IT . . . in shallow lighting coves for perfect concealment.

COMBINE IT . . . with unit or continuous lighting fixtures.

AND REMEMBER . . . no matter how you use it — AGITAIR STRIPLINE diffusing vanes create maximum mixing and aspiration . . . quick temperature equalization . . . and correct air distribution over any desired length.

Every Inch a Diffuser . . . the Vanes Make the Difference

AIR DEVICES INC.

185 MADISON AVENUE, NEW YORK 16, N. Y.

AIR DIFFUSERS • FILTERS • EXHAUSTERS

BETTER *Light* FOR BORDEN LAB

New Research Building Features Window Walls of Coolite Wire Glass

The importance of good illumination to industrial research is reflected in these bright walls of Coolite, Heat Absorbing and Glare Reducing Glass. Interiors are flooded with natural illumination, free of the harmful effects of "raw" sunlight that cause optic and physical discomfort.

4800 sq. ft. of Coolite makes these new laboratories appear larger, brighter, more comfortable . . . with plenty of conditioned light for the most exacting scientific work.

Yet, the proven ability of Coolite to absorb unwanted solar heat helps keep interiors cooler. Occupants see better, feel better, work better and more accurately in areas glazed with Coolite.

Coolite Wire Glass protects against shatter damage, resulting from fires. This Approved Fire Retardant No. 32 tends to bottle up and thus prevent the spread of flames. And the Coolite wire glass adds beauty to the exterior—the clean, blue hue harmonizes with the crisp, modern design . . . its benefits minimize need for unsightly painted screens or blinds.

For maximum comfort and protection specify Mississippi Coolite Heat Absorbing and Glare Reduced Wire Glass. Available through leading distributors of quality glass. Mississippi offers a wide variety of translucent, light diffusing glass patterns for every glazing requirement.





Write today for free catalog. Address Dept. 7

COOLITE

MISSISSIPPI *Glass* COMPANY

88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIFORNIA

Samples on request.

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

Since HOPE'S *1818*

STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH



North Street Elementary School, Greenwich, Conn.

Sherwood, Mills & Smith, Architects — *A. Barbaresi & Son, Inc., Builders*

The Extensive Use of HOPE'S Steel Window Walls Provided Substantial Savings in the Cost of this Handsome, Modern School

More and more, architects are using Hope's Steel Window Walls not only because of the substantial savings effected but because of their greater strength and rigidity which permit row upon row of uninterrupted floor-to-roof framing as in the building shown. The architect may insert doors, fixed sash, ventilators and insulated panels wherever needed. Here, each class-room contains its own outside door, a most desirable feature. In addition, there is an abundance of controlled natural light and well-planned, draft-free ventilation. The space-saving insulated panels at sill make available many extra square feet of floor space usable for cupboard storage, heating units, etc. Hope's Window Walls require a minimum of maintenance and last the life of the building.

Write for Catalog 134AR

HOPE'S WINDOWS, INC., *Jamestown, N. Y.*

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

Increase



SPECIFY

FA Power Plugin

ADD TO the efficiency, economy, and flexibility of all new or modernized plants which you are called upon to design by specifying Ⓕ POWERPLUGIN.

Ⓕ POWERPLUGIN is the modern system of power distribution — safe, dependable, economical and flexible. It facilitates plant production by making power available where and when it is needed, enables machines to be regrouped and relocated without disrupting production, reduces voltage drop to a minimum by eliminating long lead-ins, cuts maintenance costs and provides other savings. Too, it is 100% reusable.

Ⓕ POWERPLUGIN is approved by the Underwriter's Laboratories for label service. It is made in standard 10 foot sections with plug-in out-lets every foot of the way or alternately on two sides. Sections can be arranged to fit almost any need. They can be run horizontal or vertical at floor level or overhead.

Ⓕ POWERPLUGIN is available in the following capacities: 250 to 1000 amps (1200 and 1500 amps also available), 600 volts AC or less with Klampswitchfuz, Shutlbrak or Circuit Breaker plug-in units.

The next time you are called upon to design a system of power distribution, be sure to specify Ⓕ POWERPLUGIN. Your nearest Ⓕ representative listed in Sweet's will be glad to provide additional information.

ⒻPOWERPLUGIN FEATURES

Ⓕ POWERPLUGIN is made of 16 gauge steel with attractive pearl gray enamel finish.

Insulators are one piece glazed porcelain with steel channel supports riveted into position.

Flush type hinged cover plug-in openings, simplified, adjustable two-screw type fasteners for plug-in units, two sliding type mounting brackets per section for hanging as desired, electro silver-plated contact surfaces or joints with two or four brass jam bolts with phosphor bronze cup washers in elongated fastening holes for fast assembly are other features.

Either copper or aluminum conductors available.

Frank Adam Electric Co.

Phone JEfferson 3-6550
BOX 357, MAIN P. O. • ST. LOUIS 3, MO.

makers of:
busduct • panelboards • switchboards
service equipment • safety switches
load centers • Quikheter

Corinthian or "Californian" architects look to usAIRco for efficient and economical air conditioning for banks . . .

Problems of air conditioning were vastly different in these two usAIRco air conditioned banks. The older Prudential building required the installation of a ductless system, without business interruption. The newly-constructed California bank required the newest and finest system available. Both chose usAIRco . . . backed by 30 years of engineering and manufacturing experience.





↑ Architect Kenneth B. Norton selected 17 usAIRco Modu-aire units, recessed and concealed in the outer walls of the main floor and mezzanine for this Brooklyn, N. Y. bank. Small copper tubing carries hot or cold water to coil-blower units. Engineer: Frank C. Reynolds. Installation: J. M. Fink Co., Inc.

← Architects Kellingsworth, Brady & Smith used one 25 h. p. central station RK to cool the Burbank Community Bank accommodating 75 persons. The usAIRco RK contains compressor, evaporative condensor and blower sections all in one cabinet, factory balanced and tested. Engineer: Thompson Engineering Co. Contractor: Air Comfort, Inc.

For descriptive literature, write G. Robert McLain

UNITED STATES AIR CONDITIONING CORPORATION

MINNEAPOLIS 14, MINNESOTA • *Export: 13 E. 40th Street, New York 16, N. Y.*

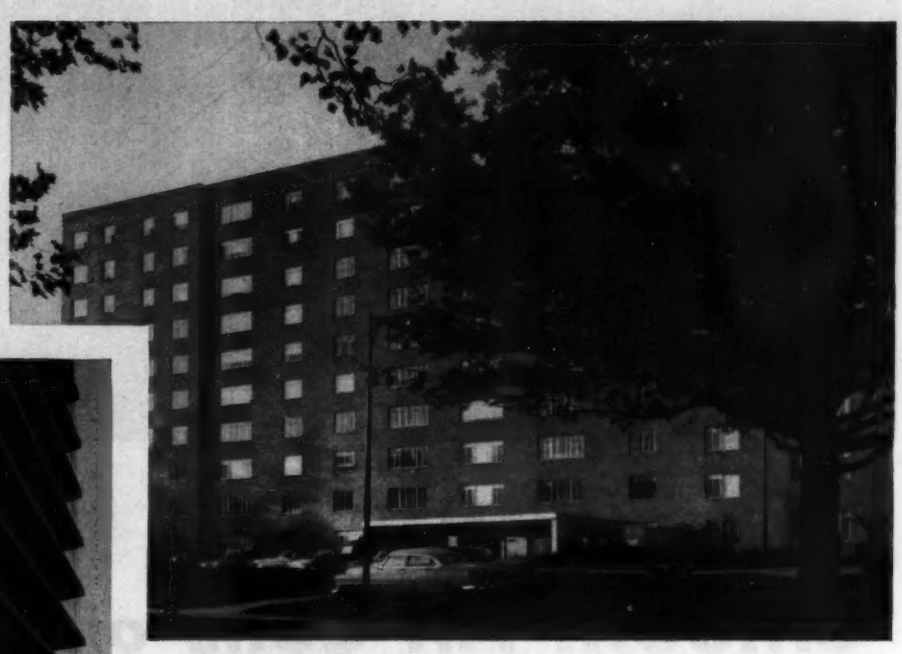
usAIRco
30 YEARS OF AIR CONDITIONING

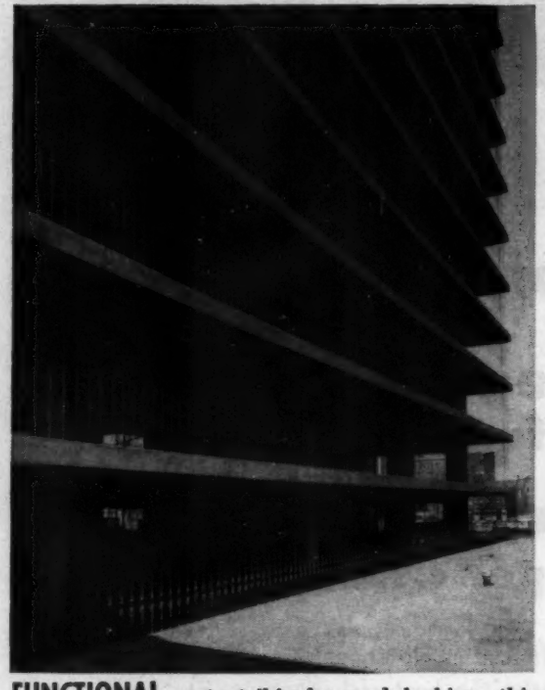
New buildings

Designed for Permanence

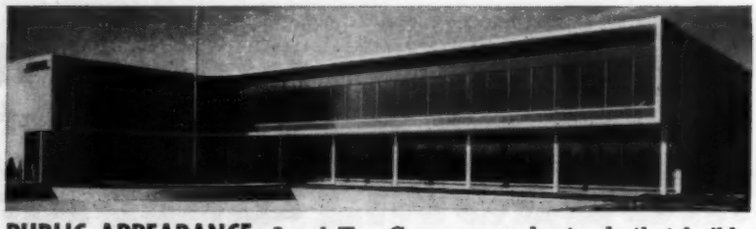
with American Welded Wire Fabric

HIDDEN QUALITY. The real, lasting quality of a building lies hidden inside its structure. And in these new Berkshire Apartments in Lakewood, Ohio, near Cleveland, reinforced concrete structural elements are used to add permanence and reduce long-term cost. American Welded Wire Fabric is used throughout to give the concrete extra strength and resistance to cracking.





FUNCTIONAL, yet strikingly good looking, this new Municipal Parking Garage in downtown Chicago, features pan and slab roof construction with American Welded Wire Fabric Reinforcement. All floors which must withstand heavy loads are also reinforced with American Fabric. Specify American Welded Wire Fabric for all your concrete.



PUBLIC APPEARANCE. Jewel Tea Company understands that buildings, even warehouses like this new one, can contribute much to the impression people form of a company. They chose attractive modern design for the building and used good-looking, durable concrete liberally. All concrete, inside and outside the building, is reinforced with American Welded Wire Fabric, which meets ASTM Specifications A 185-53T. For heavy duty construction purposes this fabric can be obtained in wire sizes up to and including ½" in diameter.

YOUR CLIENTS WILL ASK "is it Reinforced"

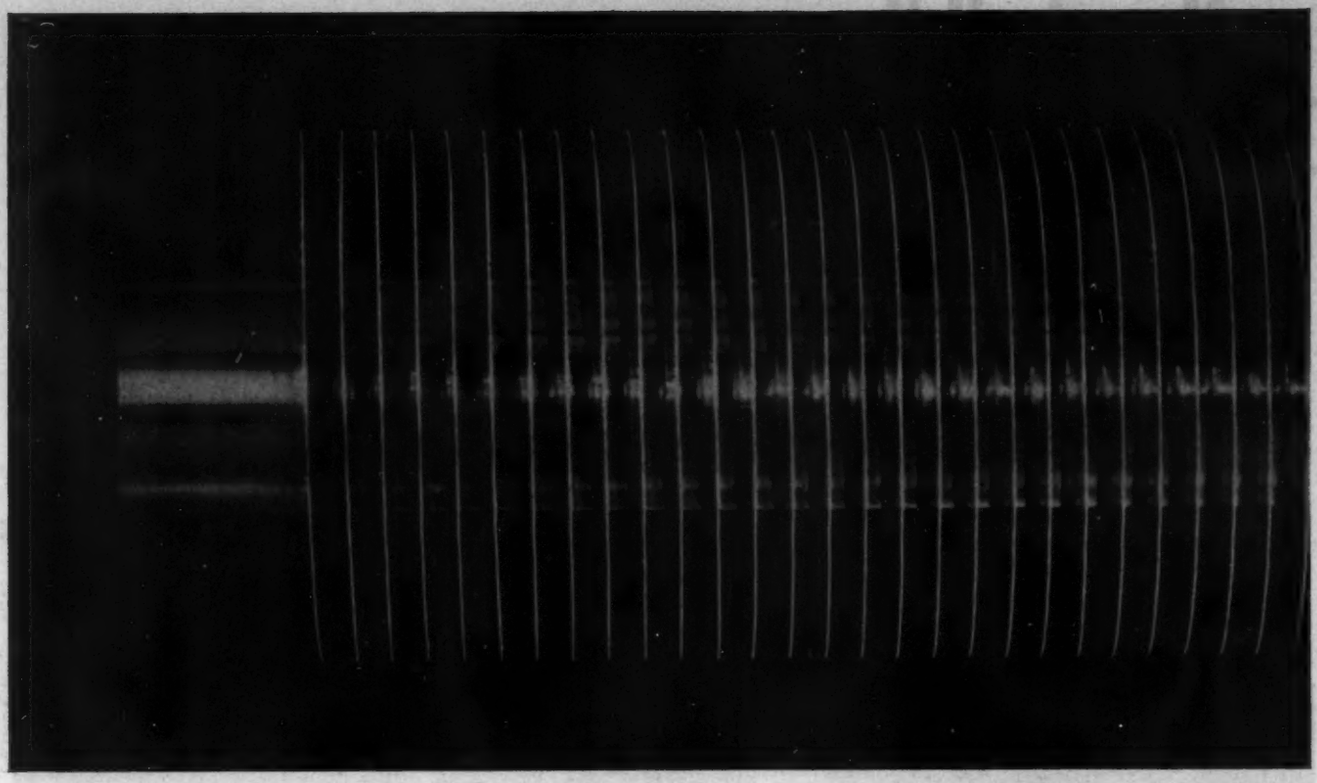
AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL, GENERAL OFFICES: CLEVELAND, OHIO
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA., SOUTHERN DISTRIBUTORS • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

EVERY TYPE OF REINFORCED CONCRETE CONSTRUCTION NEEDS

USS AMERICAN WELDED WIRE FABRIC

USS

UNITED STATES STEEL

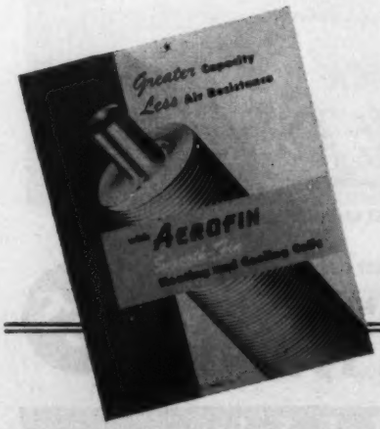


AEROFIN
Smooth-Fin Coils offer you

Greater Heat Transfer
per sq. ft. of face area

Lower Airway Resistance
—less power per c.f.m.

Aerofin smooth fins can be spaced as closely as 14 per inch with low air friction. Consequently, the heat-exchange capacity per square foot of face area is extremely high, and the use of high air velocities entirely practical. Tapered fin construction provides ample tube-contact surface so that the entire fin becomes effective transfer surface. Standardized encased units arranged for simple, quick, economical installation.



Write for Bulletin S-55

AEROFIN CORPORATION

101 Greenway Ave., Syracuse 3, N. Y.

Aerofin is sold only by manufacturers of fan system apparatus. List on request.



All business is show business...
and needs the unlimited design possibilities of

GOLD SEAL®
INLAID LINOLEUM

By using Gold Seal's 36 patterns and wide range of rich inlaid colors, you can plan special floor treatments to direct traffic flow and separate areas in stores and offices.

GOLD SEAL INLAID LINOLEUM is the *only* inlaid linoleum in America made by a natural oxidation process for greater resilience and durability. It gives extra comfort, reduces foot fatigue, resists indentation, dirt, grime and grease. Cuts maintenance time and costs; rarely pits, scars or cracks.

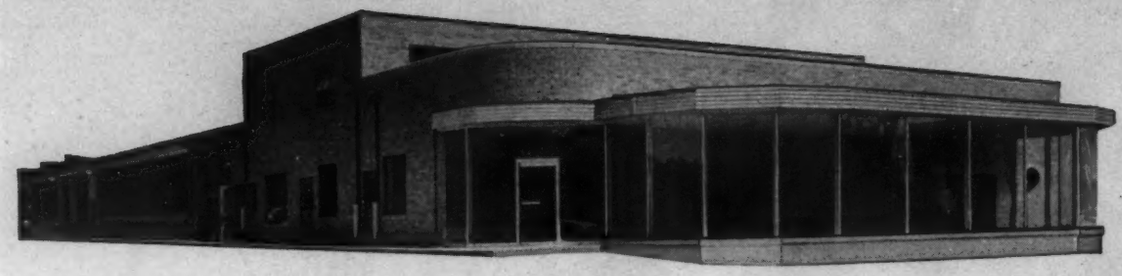
Specifications: Commercial gauge (⅛″) for heavy traffic, commercial, industrial and institutional areas. 6′ wide by-the-yard and 9″ x 9″ tile. Burlap back. *Patterns:* 22 Veltone®, 4 Plain, 6 Battleship, 5 Jaspe. Install over suspended subfloors of wood or concrete.

Satisfaction guaranteed—or your money back

For home or business...
you get the finest choice of all in...

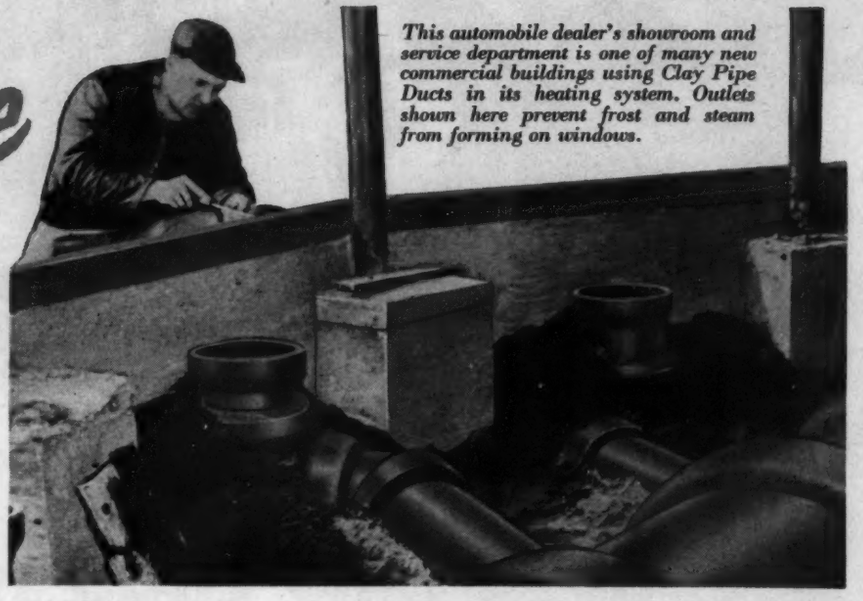
INLAID LINOLEUM • RANCHTILE® LINOLEUM • VINYLFLOR • VINYLTOP • LINOLEUM, VINYL, VINYLBEST, CORK, RUBBER AND ASPHALT TILES • CONGOLEUM® AND CONGOWALL® ENAMEL-SURFACE FLOOR AND WALL COVERINGS

GOLD SEAL
FLOORS AND WALLS
CONGOLEUM-NAIRN INC., KEARNY, N. J.



Cut Commercial Building Costs

with Clay Pipe HEATING DUCTS



This automobile dealer's showroom and service department is one of many new commercial buildings using Clay Pipe Ducts in its heating system. Outlets shown here prevent frost and steam from forming on windows.

The commercial construction boom promises to continue far into the future, authorities predict—with the best contracts going to the builders who know how to cut costs. *That's where Clay Pipe Heating Ducts can help you submit bids and estimates that are low — yet profitable.*

Clay Pipe Heating Ducts are "naturals" for basementless commercial construction. Simply lay out the duct system over a moisture membrane of roll roofing and pour the concrete floor slab over it. Installation is fast and easy. No specially skilled labor is required. Clay Pipe needs no anchoring . . . it can't float when the concrete is poured over it, and only one pouring of concrete is needed. Clay Pipe never corrodes or wears out, so it's sure to give clean, trouble-free service throughout the life of the building.

Write for complete information on designing and installing Clay Pipe Heating Duct Systems. Take full advantage of this most important practical idea for cutting construction costs in recent years!

CLAY PIPE HEATING DUCTS ARE RECOMMENDED FOR

Stores • Garages • Churches • Office Buildings • Show Rooms • Service Stations • Storage Buildings Light Manufacturing

NATIONAL CLAY PIPE MANUFACTURERS, INC.

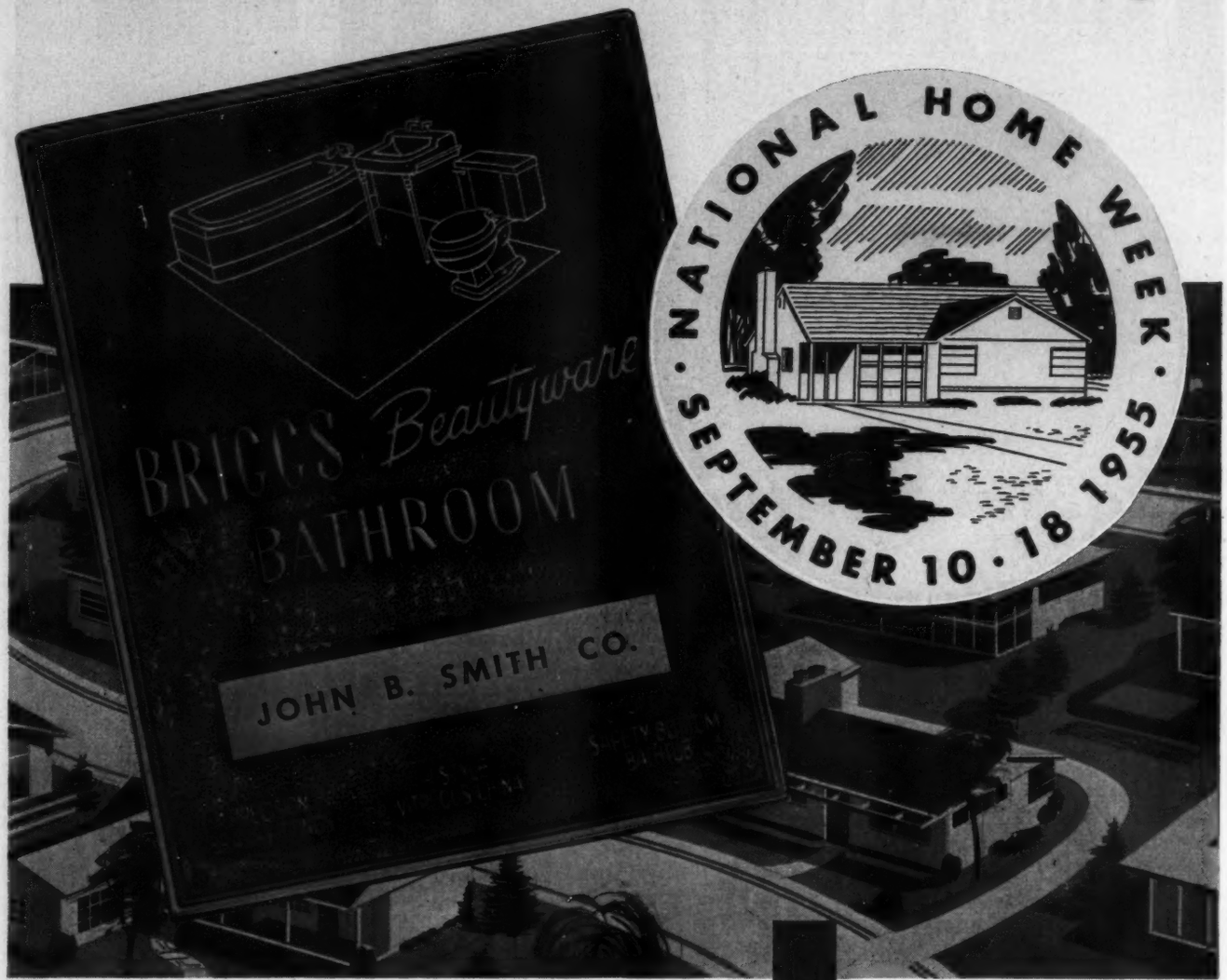
1820 N Street N. W., Washington 6, D. C.

206 Connally Bldg., Atlanta 3, Ga.
100 N. LaSalle St., Rm. 2100, Chicago 2, Ill.
703 Ninth & Hill Bldg., Los Angeles 15, Calif.
311 High Long Bldg., 5 E. Long St., Columbus 15, Ohio

Vitrified CLAY PIPE

C-855-1

Symbols of Better Living



PLEASE NOTE: Interest in quality bathrooms—and especially *two* of them—will be stronger than ever during this year's National Home Week.

REASON: Colorful new bathrooms are a major factor in making people dissatisfied with their old homes—and in stimulating their interest in new ones.

Briggs Beautyware provides the design, the color and the features that are most appealing to your customers.

And you can capitalize on this famous brand-name product by displaying the Briggs Beautyware bronze plaque during National Home Week. This attractive plaque is available with your name imprinted at no cost from your local Briggs representative or from—

Briggs Manufacturing Co., 300 Buhl Bldg., Detroit, Mich.

Two Bathrooms of Briggs Beautyware —New Pattern for Today's Living



Radiant Heating Used to Provide Maximum Comfort for Cerebral Palsy Patients

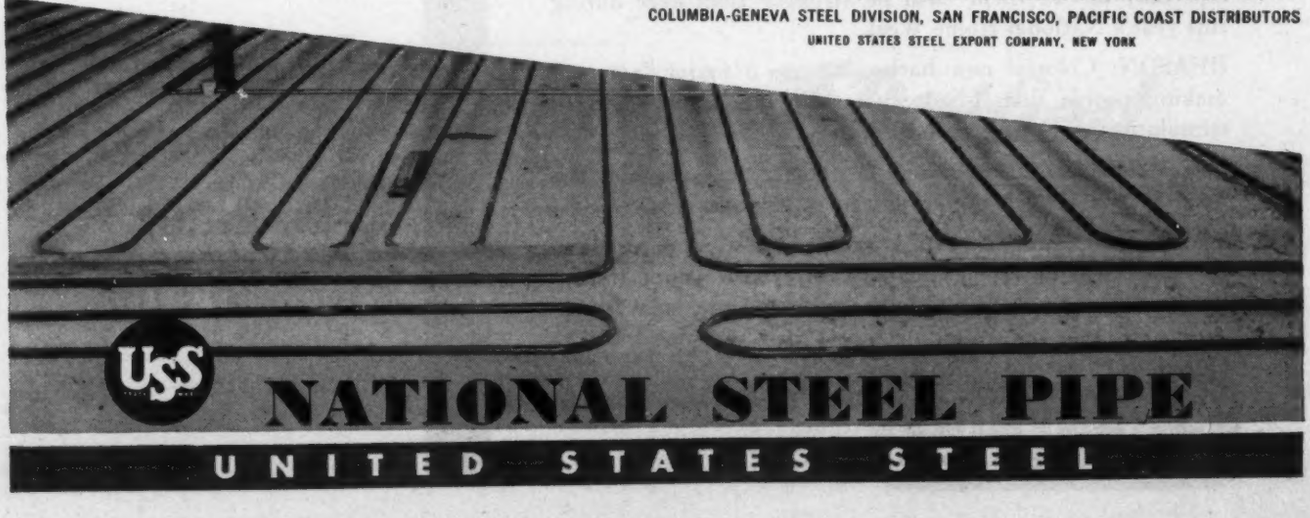
A complete radiant heating system of USS National Steel Pipe has been installed at the Walter D. Matheny School for Cerebral Palsy Children, Peapack, N. J., to insure heating comfort for the patients and to keep operating costs of the institution at an efficient low.

The majority of the pipe used in private rooms was ¾-inch standard. Supply mains through the hallways were laid in sizes up to 2 inches diam.

In installations such as this, where dependability, efficiency and economy are the prime considerations, architects and contractors almost inevitably turn to National Pipe. They have been specifying National, in fact, for over 60 years as the "standard" for conventional plumbing and heating systems. And why not? National Steel Pipe has every characteristic necessary to meet the requirements of such applications—smooth, uniform bending; sound, strong welding properties; and long service life. These are the characteristics that have made National the largest selling pipe in the world.

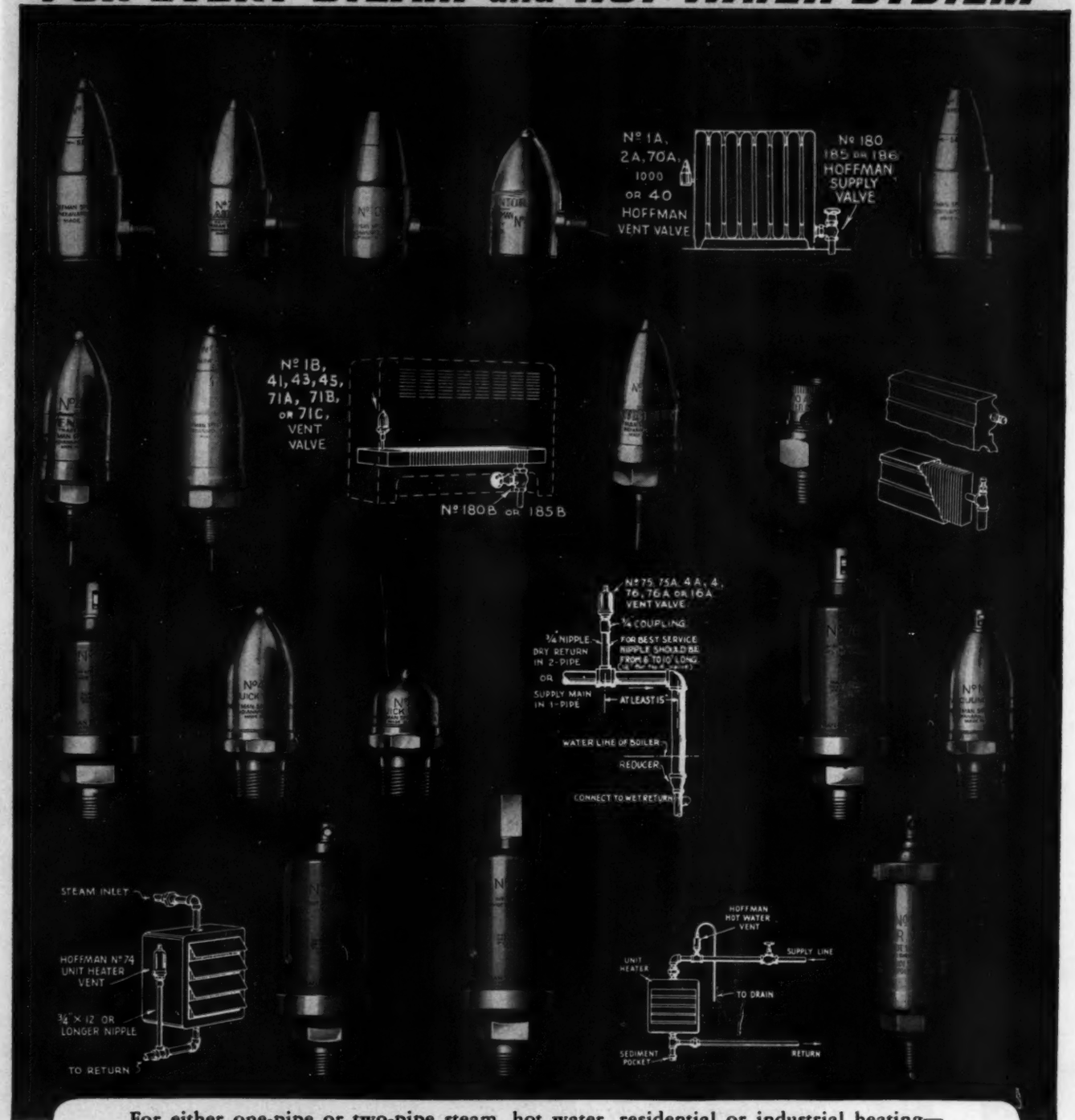
Write *now* for complete details on the use of USS National Steel Pipe for radiant heating and snow melting applications. Ask for Bulletin No. 19. And keep National in mind for your next installation.

NATIONAL TUBE DIVISION, UNITED STATES STEEL CORPORATION, PITTSBURGH, PA.
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



HOFFMAN VENTING VALVES

FOR EVERY STEAM and HOT WATER SYSTEM



For either one-pipe or two-pipe steam, hot water, residential or industrial heating—Hoffman assures you the correct Vent Valve for each specific requirement. Radiator Valves all feature the hinged drainage tongue. For hard-to-balance radiators, the Hoffman line includes adjustable-port valves, available for vacuum and non-vacuum systems. *It's the COMPLETE, tested, quality line* backed by a dependable, single source of supply and responsibility. *Yet Hoffman Valves cost no more than the ordinary kind.* For best performance, specify genuine Hoffman Vent Valves. Catalogs available on all items.

HOFFMAN SPECIALTY MFG. CORP. • 1700 West 10th Street, Indianapolis 7, Indiana

Makers of Valves, Traps, Hot Water Heating Systems, Vacuum and Condensation Pumps . . . Sold by Leading Wholesalers of Heating and Plumbing Equipment



New lighting beauty...plus

beautifully simple to install

New "Magic Frame" Troffers offer unprecedented beauty *plus* a complete series of design improvements that provide unequalled advantages in installation and performance . . . all at a cost that is completely competitive. Not a bolt, screw or light leak need mar the clean, smooth lines of your troffer lighting.

- Available with all types of flat and curved glass, metal and plastic louvers—*including ½" plastic cube louver.* Doors are completely interchangeable.
- Exact 12" opening insures attractive appearance in a variety of pattern arrangements—continuous or individual mounting.
- "Magic Frame" doors lock securely, open on two concealed hinges. Remove by merely lifting and shifting—no screws to loosen, remove or lose.

Write for new Data and Specification Catalog showing the most complete variety of troffer lighting fixtures now available.



A screwdriver is all you need to install "Magic Frame" Troffers! Combination Reflector Plate-Wireway Cover being raised into 8-ft. fixture, in photo, contains all electrical components. For minor adjustments, cover hangs on jack chain by just loosening two captive nuts . . . or the cover can be removed for major adjustments. Once chassis is in ceiling it never has to be touched!

Exclusive "Adjusto-Hangers" and "Speedy Latches" permit one man installation of 4-ft. units. Insure perfect alignment and eliminate loose screws and bolts. No tools needed except screwdriver.

Electro Silv-A-King Corporation

1535 S. PAULINA ST., CHICAGO 8, ILLINOIS • SPRUCE & WATER STS., READING, PENNSYLVANIA

DESIGNERS AND MANUFACTURERS OF THE FINEST IN LIGHTING

CROWNING ACCOMPLISHMENT in resilient flooring... VINYL TILE by

WRIGHT



LIVING ROOM



BEDROOM



KITCHEN

See, feel, flex a square of WRIGHT Vinyl Tile--
you'll agree there's no flooring material
to compare with it, either for elegance or practicality.

End product of long research and unique manufacture,
WRIGHT Vinyl Tile is fully homogeneous.
That's why it never wears unevenly . . . why its high lustre
and elegant color patterns gleam uniformly over the whole
flooring for the entire life of the tile.

But more than that--WRIGHT Vinyl Tile is a
supremely practical flooring. It will not buckle under
temperature changes. It will not warp or crack.
And it is highly resistant to grease, acids, alkali, light
and flame. Moreover, it is water-proof, non-slip,
and easier to keep clean than any
other type of resilient tile flooring.

Discover for yourself how remarkable WRIGHT Vinyl Tile
really is--how perfectly suitable for every type of installation.
Fill out and mail the coupon for full information
and free samples--before you select flooring
for your current projects.

WRIGHT MANUFACTURING COMPANY
Division of Mastic Tile Corporation of America
Houston, Texas

WRIGHT MANUFACTURING COMPANY
Div. of Mastic Tile Corporation of America
Dept. W8-9 P. O. Box 986, Newburgh, N. Y.

Please send me full details and free samples of
WRIGHT Vinyl Tile ☐ Rubber Tile ☐

Name_____

Address_____

City_____ **Zone**_____ **State**_____

WAS



Grumman Peconic River Plant in Calverton. Architects: Office of Alfred Easton Poor; consulting engineers: Seelye Stevenson Value and Knecht and Guy B. Panero; air-conditioning contractors: J. L. Murphy, Inc.—all of New York, N.Y.

Grumman jets are made in a factory *that "breathes"*

New Grumman aircraft plant is completely closed in and soundproofed. American Blower equipment is used to create a controlled, comfort-conditioned indoor climate.

The new Peconic River Plant of the Grumman Aircraft Engineering Corporation, in Calverton, L.I., N.Y., is one of the first aircraft factories built solely for jet assembly and flight operations.

A major designing problem was: how to eliminate the ear-splitting racket of jet engines starting up outdoors—highly distracting to employees involved in intricate manufacturing processes.

The solution: soundproofing—including double-paned, sealed-shut windows. And this posed an air-conditioning problem. For the factory, thus soundproofed, was virtually airtight!

To circulate fresh, conditioned air in a continuous cycle—and to exhaust heat, fumes, and stale air—a comfort-conditioning system was installed that, in effect, resulted in a factory that "breathes". . . a system built around American Blower Supply and Exhaust Fans, Air Conditioning Units, Sprayed Coil Dehumidifiers, Heating and Cooling Coils, Vaneaxial Fans, Venturafin Unit Heaters, and necessary accessories. This gave the Peconic Plant complete humidity and temperature control, providing maximum working comfort and efficiency.

American Blower engineers are familiar with the special air-handling and air-conditioning problems of many industries. For assistance or technical data, contact our nearest U.S. or Canadian branch office.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO
Division of American Radiator & Standard Sanitary Corporation

AMERICAN BLOWER



Deadly Grumman Cougar thunders over Long Island in test flight. Noise of jet take-offs dictated soundproof plant construction.

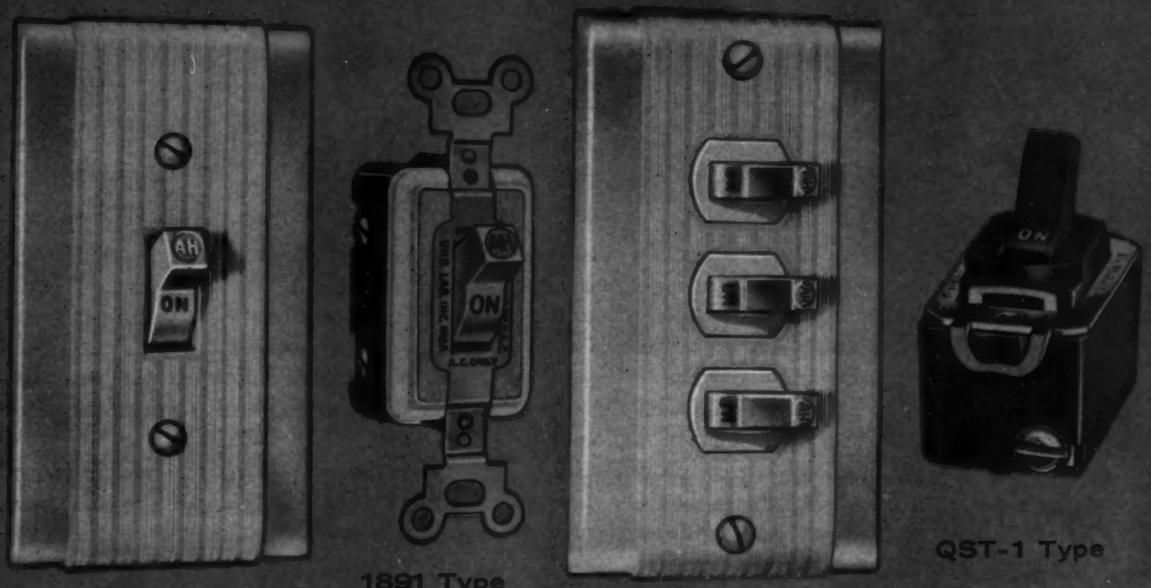


Pleasant indoor climate for offices in administration building is created by using American Blower Air-Conditioning Units.



Sixteen powerful American Blower Supply and Exhaust Fans circulate fresh outdoor air; exhaust stale air in continuous cycle.

FOR THOSE WHO SPECIFY QUIET *and* QUALITY



ALL TYPES NOW AVAILABLE WITH SCREW OR SCREWLESS WIRE-LOCK TERMINALS

A COMPLETE LINE OF ARROW AH HART Quiette LIGHT SWITCHES

In palace or project, the demand is for quality light switches that quietly go about the job of operating both incandescent or fluorescent lights and appliances through smooth mechanical action. The complete line of safe, dependable Arrow-Hart Specification Grade QUIETTE Light Switches fulfills that popular demand.

LIFETIME 1891 Type:

Ratings: 15 amp — 120-277 volt ac only; 20 amp — 120-277 volt ac only. With either Screw Terminals or Screwless Wire-Lock Terminals.

INTERCHANGEABLE QST-1 Type:

Ratings: 15 amp — 120-277 volt ac only; 20 amp (with screws only) — 120-277 volt ac only. S.P. and 3-way screwless switches are standard with line shunts.

Both available in single and double pole; 3- and 4-way; Brown or Ivorylite; listed as standard by Underwriters' Laboratories.

ARROW-HART
WIRING DEVICE DIVISION
103 HAWTHORN STREET, HARTFORD 6, CONN.

OFFICES, SALES ENGINEERS AND WAREHOUSES IN:

ATLANTA	DALLAS	NEW YORK	HAVANA, CUBA
BOSTON	DETROIT	PHILADELPHIA	•
CHICAGO	LOS ANGELES	ST. LOUIS	TORONTO, CANADA
CINCINNATI	MILWAUKEE	SAN FRANCISCO	•
CLEVELAND	MINNEAPOLIS	SEATTLE	LONDON, ENGLAND

Quality WIRING DEVICES • MOTOR CONTROLS
ENCLOSED SWITCHES • APPLIANCE SWITCHES

WIRING DEVICE DIVISION AR
THE ARROW-HART & HEGEMAN ELECTRIC CO.
103 HAWTHORN STREET, HARTFORD 6, CONN.

Please send my copy of "New Quiette Switches" folder (Form WD-ST-75)



NAME_____
POSITION_____
COMPANY_____
CO. ADDRESS_____
CITY_____ ZONE___ STATE____

Ultra-modern Sears retail store shows how you can provide

Indoor weather to satisfy your most progressive client

Specify Honeywell Customized Temperature Control—most important comfort feature any building can have

Comfortable shopping atmosphere for customers, efficient working conditions for employees—these are of vital concern in the retail stores of Sears, Roebuck and Company's world-wide merchandising organization.

Small wonder, then, that a Honeywell Customized Temperature Control installation was specified for the new, completely air conditioned Sears store in Oklahoma City. For this is the truly *modern* way to ensure ideal indoor weather, no matter how varied a building's functions may be.

"Customized" is the key word here. Because it means that a Honeywell Customized Temperature Control installation is designed to fit the needs of the building and its occupants—in heating and cooling, in ventilating and humidity control.

Only Honeywell can provide true "customized" control. Because only Honeywell manufactures all three types of controls—pneumatic, electric and electronic.

The comfort story of the new Sears store is told briefly by the floor plan and picture captions. The *techniques* used, applied to your specific problems of occupancy, use and exposure, can help you to provide your most progressive clients with the kind of ideal indoor weather they need.



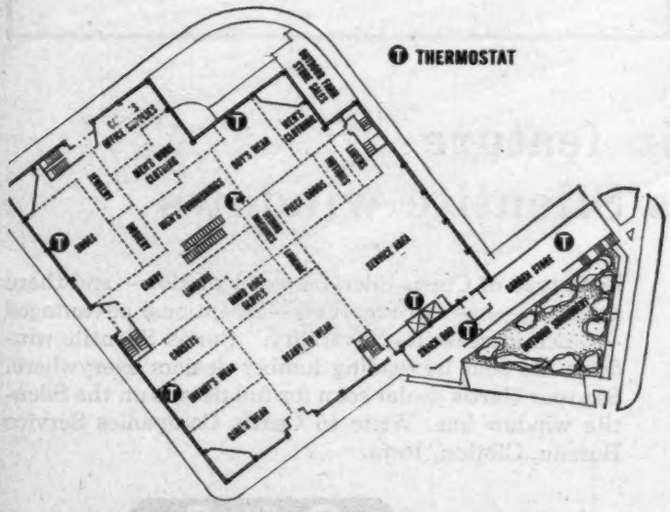


Individual temperature control is an important benefit enjoyed by occupants of Sears' executive offices. Adjustments may be made quickly to meet exact personal requirements. The result is an environment of ideal comfort that encourages maximum efficiency—an advantage made possible *economically* by the Honeywell Customized Temperature Control installation.



Few walls are visible in Sears' main shopping areas. Large open spaces create one temperature control problem; customers, in numbers that vary from hour to hour and day to day, create another. Both are solved by the Honeywell Customized Temperature Control installation, with its accurate thermostats that respond quickly to occupancy variations.

Thirteen zones, each precisely controlled by Honeywell thermostats, are employed in heating and cooling Sears' Oklahoma City store. Plan detail below shows ground floor thermostat locations. Strategically placed, they compensate for changing factors of occupancy and exposure so that comfort levels are held constant. Called for here was a comfort control installation as advanced as the building itself: Honeywell Customized Temperature Control.



Architects-Engineers: Sorey, Hill & Sorey; J. E. Redden, Chief Architect, Sears, Roebuck & Co.; General Contractors: Manhattan Construction Co.; Mechanical Contractor: W. A. Landers Co.

For comfortable, more productive temperature in new or existing buildings —of any size—specify Honeywell Customized Temperature Control

Whether it's a store, factory, hospital, bank—any building of any size, new or existing—Honeywell Customized Temperature Control can help solve your clients' problems of heating, ventilating, air conditioning and industrial control. At the same time you can give them more comfort, more efficiency, more economy.

For full details on Honeywell Customized Temperature Control, and the economical Periodic Maintenance Plan, call your local Honeywell office. Or write Honeywell, Dept. AR-9-132, Minneapolis 8, Minnesota.

MINNEAPOLIS **Honeywell**

Customized Temperature Control

112 offices across the nation







[1] Silentite double-hung windows are truly weather-tight. Special patented features, including the most effective weather-stripping known, bar out dust—protect furnishings—keep heating and air conditioning costs low. Curtis Silentite windows open and close at a touch—and retain this ease of operation throughout a lifetime of service.

[2] Easy cleaning—from the inside—is only one feature of Curtis Silentite casements. A special adjuster holds these casements rigid in any open position—stops swinging or rattling. And Silentite casements are so weather-tight they can save up to 16% of fuel or air conditioning costs.

[3] Curtis Convertible windows are really something special! You can use them as awning windows—casements—ribbon windows—and in more than a thousand combinations. Used as awning sash—as shown here—they provide draftless ventilation—let fresh air in but keep rain out. Like all Curtis Silentite windows, they are guaranteed.

"Livability"...a built-in feature of Curtis Silentite windows

If windows had only to provide an outlook and admit light, almost anybody could design them. But to design windows that make living happier, more comfortable, takes thorough research, unusual ingenuity, skilled craftsmanship. That explains the popularity of Curtis Silentite windows—and the substantial sales appeal they add to houses in which they are used..

Each type of Curtis Silentite wood window—and there are many—has *extra* features—exceptional advantages—which increase its "livability." Curtis Silentite windows are sold by leading lumber dealers everywhere. See *your* Curtis dealer soon for full details on the Silentite window line. Write to Curtis Companies Service Bureau, Clinton, Iowa.

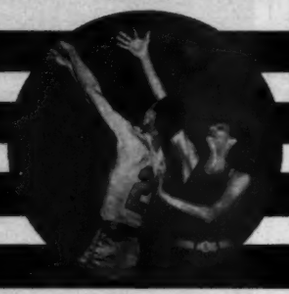
CURTIS WOODWORK

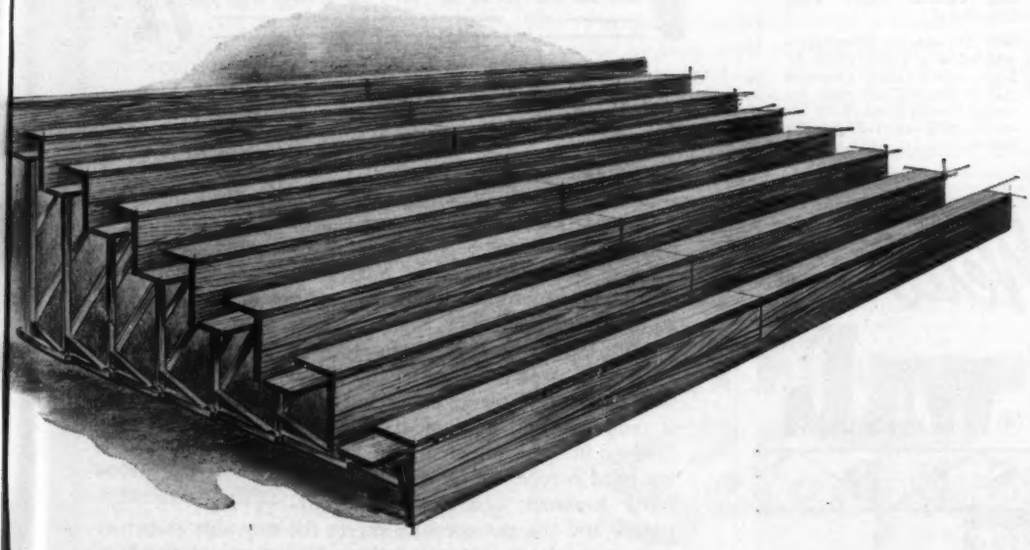
Heart of the Home

CURTIS WOODWORK SILENTITE the Insulated window



WAYNE GYMNASIUM SEATING





functionally beautiful . . . beautifully functional

The statement above neatly sums up what we have done to make Wayne the finest seating available today for your gymstand dollar.

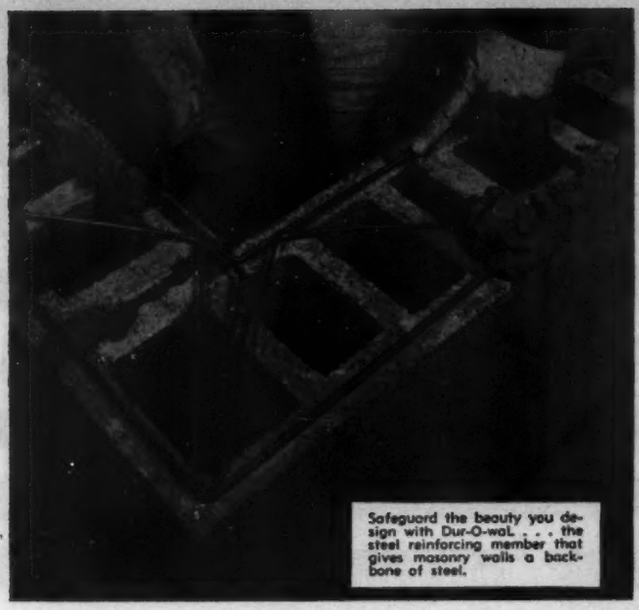
We at Wayne build into our gymnasium seating a smooth, smart, modern appearance that blends well into today's modern gymnasiums. Combined with this are all of Wayne's famous engineering advances. Closed riser board construction for fine appearance and safety. Exclusive alignment frame assembly permits smooth, easy, straight opening and closing operation. Wayne Gymstands are as beautiful as they are efficient.

Compare Wayne appearance . . . and Wayne engineering. For the same investment you'll specify *better seating* . . . Wayne seating!



Wayne's Rolling Gymstand Catalog R-54 free on your request—write direct to Wayne Iron Works, 148 North Pembroke Ave., Wayne, Penna.

WAYNE



Just what the Architect ordered!

LEADING architects are studying the findings of Dur-O-waL's independent research tests. Now you can specify steel reinforcing for every masonry wall, on the basis of these scientific findings. Trussed-designed, butt-welded Dur-O-waL reinforces vertically and horizontally to combat cracks . . . safeguard masonry beauty.

Get Laboratory-Tested PERFORMANCE FACTS and Specify by Name

Independent Research Findings available now on Dur-O-waL.

Patented Dur-O-waL features a trussed design. This steel reinforcing for block, brick and tile walls assures uniform quality of product and scientifically tested performance. Get the Dur-O-waL facts today. Learn how you can save time, cut costs and combat cracks with Dur-O-waL.

Dur-O-waL is electrically-welded in a single plane of high tensile steel (100,000 p.s.i.); knurled side rods increase mortar bond. Your inquiry will receive prompt attention.

Butt Weld

DUR-O-WAL

WITH TRUSSED *Design*

SYRACUSE 1, N.Y.	Dur-O-waL Products, Incorporated, Box 628
TOLEDO 5, OHIO	Dur-O-waL, Incorporated, 165 Utah Street
BIRMINGHAM 7, ALA.	Dur-O-waL Products of Ala. Inc., Box 5446
PHOENIX, ARIZ.	Dur-O-waL Div., Frontier Mfg. Co., Box 49
CEDAR RAPIDS, IA.	Dur-O-waL Div., Dept. 657, Cedar Rapids Block Co.

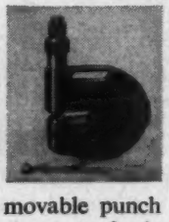


Hole No. 20 in less than an hour . . . he's using the

VELOCITY-POWER

PORTABLE PUNCH

Here's the modern answer to those time-consuming, troublesome hole-punching jobs through steel plates. This remarkable tool, utilizing gas pressure generated from the discharge of a blank cartridge, punches holes through I-beams, H-beams, angles, channels, columns, and other structural shapes and sections at the rate of 20 to 30 holes per hour, *safely*.



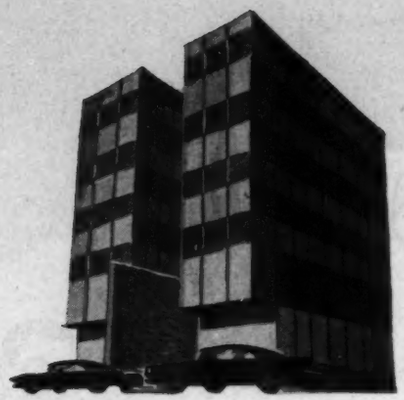
Here's how it works. The tool is positioned over the edge of the plate, then clamped in place. The firing head is removed, and a blank cartridge is inserted in the firing chamber. The firing head is replaced. A blow from the firing hammer discharges the cartridge, and the gas pressure drives the movable punch unit through the plate section. Holes are perfectly smooth . . . no need to ream or file.

As you can see from the picture, the unit is portable, self-contained. And with only one moving part, you get trouble-free service. There's a size and model for every punching job. We will be happy to demonstrate on the job. Write for details.

VELOCITY POWER TOOL CO.

201 North Braddock Avenue, Pittsburgh 8, Pa.





Now every room and office can be comfortable



Iron Fireman SelecTemp heating has a thermostat in every room

The *ultimate* in heating comfort—*a thermostat* in every room—is both simple and practical with the Iron Fireman SelecTemp heating system. Occupants of each room or office can select any temperature desired, at any time. Rooms stay at the selected temperatures. Each room unit automatically compensates for heat gains and losses caused by changes in outdoor temperature, cold winds and warmth from the sun—increasing or decreasing heat output.

SELECTEMP HIGHLIGHTS

THERMOSTAT IN EVERY ROOM. Temperatures can be varied in every room to fit the "activity plan" and personal preference of the occupants.

MODULATED HEAT. Air circulation is continuous. Both temperature and volume of air are automatically modulated, as required to offset heat loss from room.

FILTERED, CIRCULATED AIR. Individual room air circulation prevents transmission of odors or bacteria from other rooms. Air is cleaned by a spun glass filter in each room unit. Filtered outside air can be introduced if desired.

BOILER LOCATION. Boiler can be placed in any desired location, with proper distribution of heat to every room. Year-around domestic hot water coils available.

LOW POWER COST. No electricity required to operate circulating fans. Nonelectric thermostats.

LOW INITIAL COST. Easily installed in either new or old construction. Small soft copper tubing (¼ inch I.D.) carries steam to individual room heater units. Return lines are ⅛ inch. Substantial savings in installation costs.

LOW FUEL COST. Temperature easily reduced in unused rooms. Also eliminates overheating.

AUTOMATICALLY BALANCED. No special adjustments of dampers, valves or orifices required to balance heating system. Each unit continuously regulates heat needed for each room. Automatically compensates for external heat sources such as fireplace or solar heat, without affecting temperatures of other rooms.

ECONOMICAL INSTALLATION AND OPERATION

Regardless of the type or size of structure; office building, hotel or apartment house, school, hospital, or house, SelecTemp heating can be economically and efficiently installed. Flexible copper tubing, smaller than your little finger, carries low pressure steam to each room unit.

In addition to individualized heating comfort SelecTemp brings substantial operating savings. The fuel waste resulting from overheating (symptom: occupants open the windows), and the unnecessary heating of unused space, is eliminated. A fan in each room unit, operated by a steam turbine, continuously circulates filtered warm air. No electricity is used for fans or thermostats.

ASK FOR FULL INFORMATION

Before choosing a heating system for any building or residence, whether new construction or being modernized, it will pay you to get the facts about the Iron Fireman SelecTemp—a completely new concept in heating practice. Just mail the coupon or write.

Iron Fireman®

SelecTemp®

MODULATING ZONE HEATING



Send for free booklet



IRON FIREMAN MANUFACTURING CO.
3085 West 106th Street, Cleveland 11, Ohio.
In Canada, write to 80 Ward St., Toronto, Ontario.

Send literature on Iron Fireman SelecTemp heating.

Name_____

Address_____

City_____ State_____



Information Please...

Architect: "How can I plan for the most efficient venting system?"



Builder: "What type of vent is best for both economy and buyer satisfaction?"



Client: "How can I be sure of a safe and durable gas venting system?"





Get the latest facts about gas venting

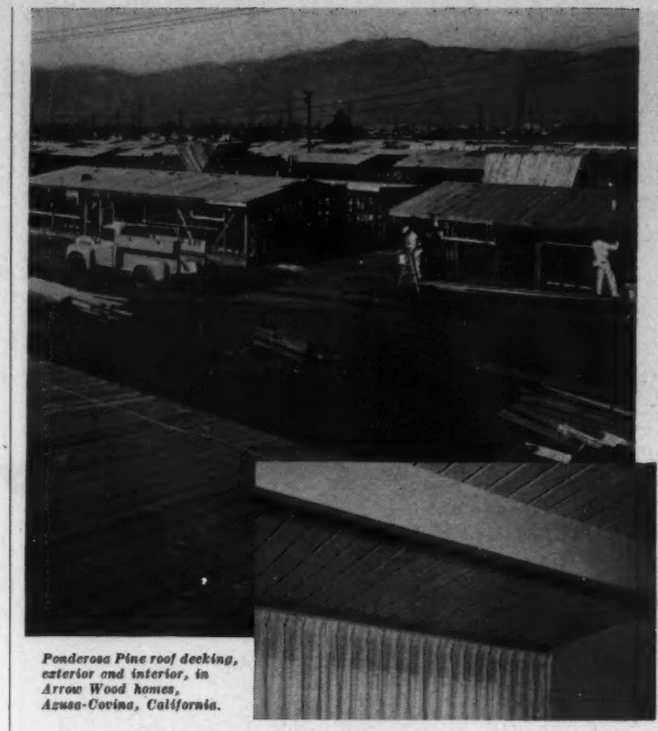
This new, specially prepared 16-page book is full of all the latest facts and helpful information about correct gas venting — its design, planning and installation. You'll find it an important, up-to-date addition to your information file, one that can save you considerable time and money.

write for your free copy today



METALBESTOS DIVISION
WILLIAM WALLACE COMPANY · BELMONT CALIF

Offices in Belmont and Glendale, Calif., Seattle, Denver, Dallas, Des Moines, Blue Springs, Mo., Minneapolis, Chicago, Atlanta, Akron, Louisville, New York, Buffalo, Westbrook, Conn., Richmond, Va.
Stocked by principal jobbers in major cities. Factory warehouses in Atlanta, Dallas, Philadelphia, Des Moines, Chicago, New Orleans.



Ponderosa Pine roof decking, exterior and interior, in Arrow Wood homes, Azusa-Covina, California.

"Ponderosa Pine reduces construction costs!"

WILLIAM WEINBERG, Larwin Company, builders and developers of Arrow Wood homes, Azusa-Covina, California.

"Through Ponderosa Pine roof decking (2x6 tongue and groove), we have reduced construction costs," says Mr. Weinberg of the Larwin Company, "which allows us to add to the built-in convenience and livability of our homes in other ways. These woods readily conform to our requirements for a residential roof deck. The underside of the smoothly milled knotty grades is finished as a ceiling with a lightly pigmented color.

"Another of the top-quality features appreciated by the buyers is the smooth, quiet operation and trim appearance of dependable Ponderosa Pine slide picture windows, which fit so well into the contemporary stylings of our homes."

Your local lumber dealer can supply this and other carefully selected woods from the Western Pine Region.

the Western Pines — PONDEROSA PINE, IDAHO WHITE PINE, SUGAR PINE

the Associated Woods FROM THE WESTERN PINE REGION — LARCH, DOUGLAS FIR, WHITE FIR, ENGELMANN SPRUCE, INCENSE CEDAR, RED CEDAR, LODGEPOLE PINE

Write for free illustrated booklet, "PONDEROSA PINE," to WESTERN PINE ASSOCIATION, Dept. 415-U, Yeon Bldg., Portland 4, Oregon.

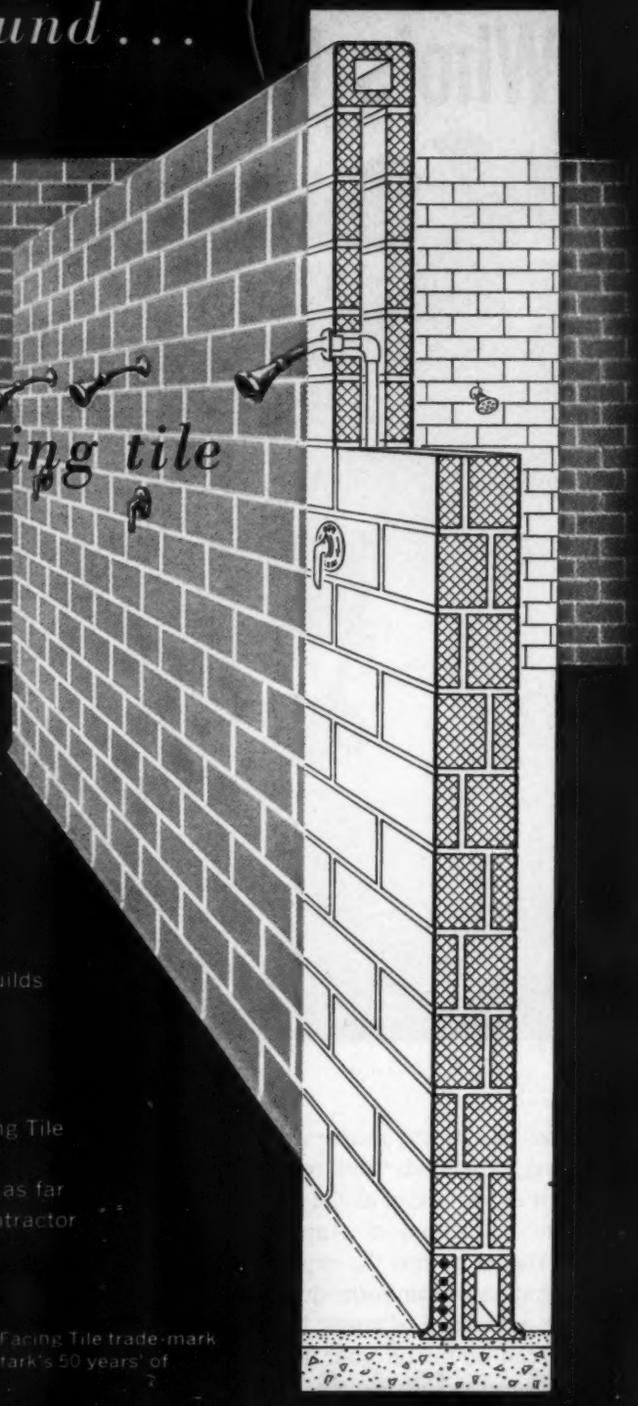
"PP" is a registered trademark

TODAY'S WESTERN PINE TREE FARMING GUARANTEES LUMBER TOMORROW

structurally sound . . .

STARK

glazed facing tile



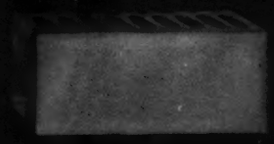
When Stark Glazed Facing Tile has been installed your clients see it only as a beautiful, maintenance saving ceramic finish.

But you can remind them that its value is more than surface-deep, that it also builds a structural wall with the strength and dimensional stability that only hard-burned clay can offer.

This double value puts Stark Glazed Facing Tile in heavy demand. To assure on-schedule delivery, specify colors, sizes and shapes as far in advance as possible, and urge your contractor to order early.



REMEMBER "STARKy"!—the Facing Tile trade-mark that means top quality, backed by Stark's 50 years' of manufacturing experience.

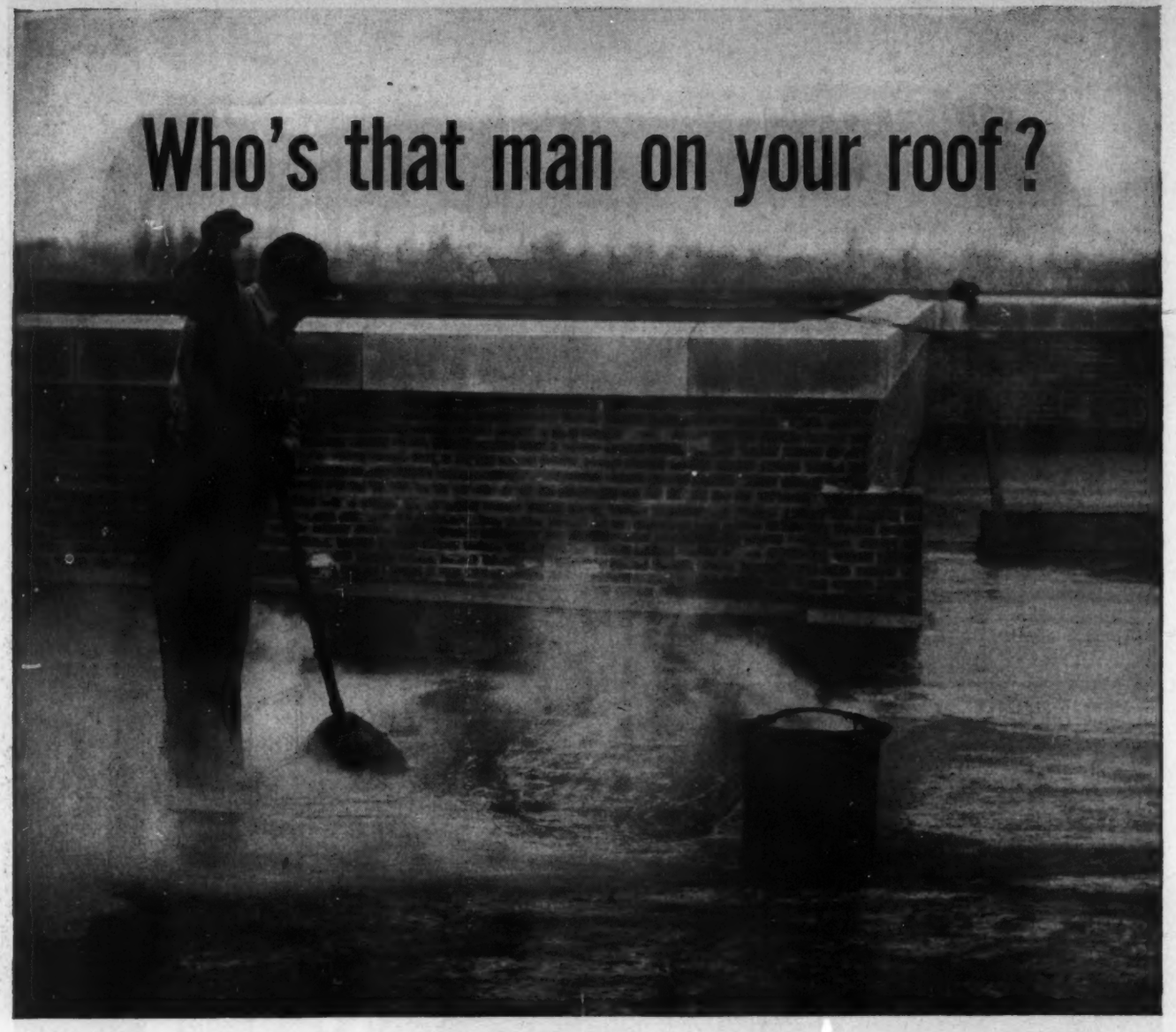


STARK CERAMICS, INC.

Canton 1, Ohio

14303 Livernois Avenue, Detroit 4, Michigan • 15 East 26th Street, New York 10, N. Y.

FTI STRUCTURAL



Did you *specify* the *roofer* as well as the roof, application methods and materials? The right roofer is as important as the right roof.

If he's a Ruberoid Approved Roofer you can be sure of getting the experience and "know-how" that means uniform quality of application and the avoidance of costly headaches.

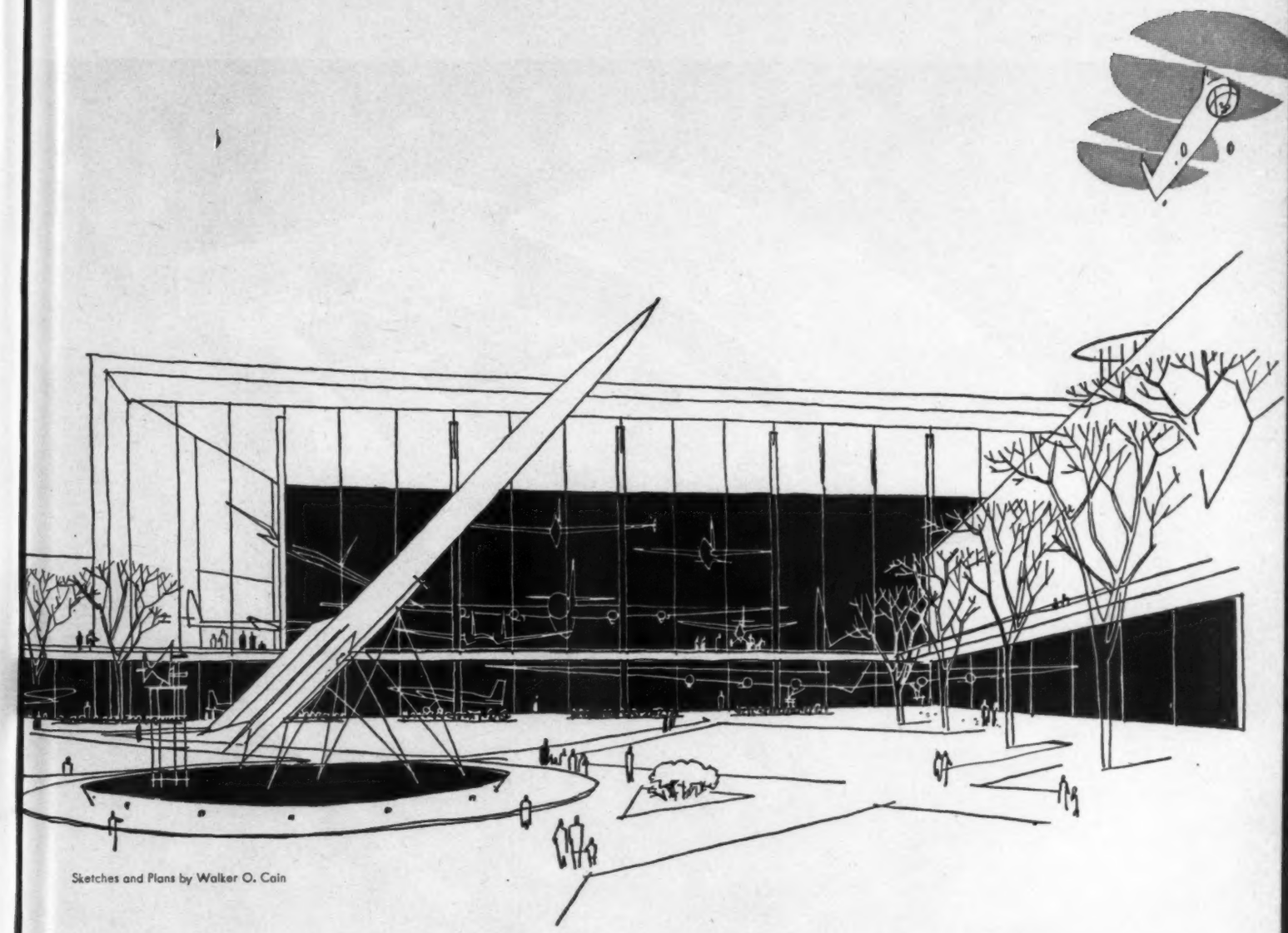
You can count on your Ruberoid Approved Roofer for sound advice, too . . . not only because of his experience . . . but because Ruberoid makes every type of built-up roof in specifications to meet every need. Ruberoid Approved Roofers are not prejudiced in favor of any one type.

The Ruberoid Built-Up Roofing Specification Book is handy, useful reference for the selection of any type of roof . . . large or small . . . smooth-surfaced asbestos, coal tar pitch with gravel or slag surfacing, or gravel-and-slag surfaced Ruberoid Special Bitumen. It also contains practical working details for a wide variety of flashing and eave construction. If you don't have a copy, write for one to The Ruberoid Co., 500 Fifth Ave., New York 36, N. Y.



The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS



Sketches and Plans by Walker O. Cain

FOR THE AIR AGE

A NATIONAL MUSEUM

The Smithsonian Institution *McKim Mead & White, Architects*
James Kellum Smith, partner in charge *Walker O. Cain, Associate* *Edwin A. Olsen, project Administrator*

NATIONAL AIR MUSEUM

The Smithsonian Institution

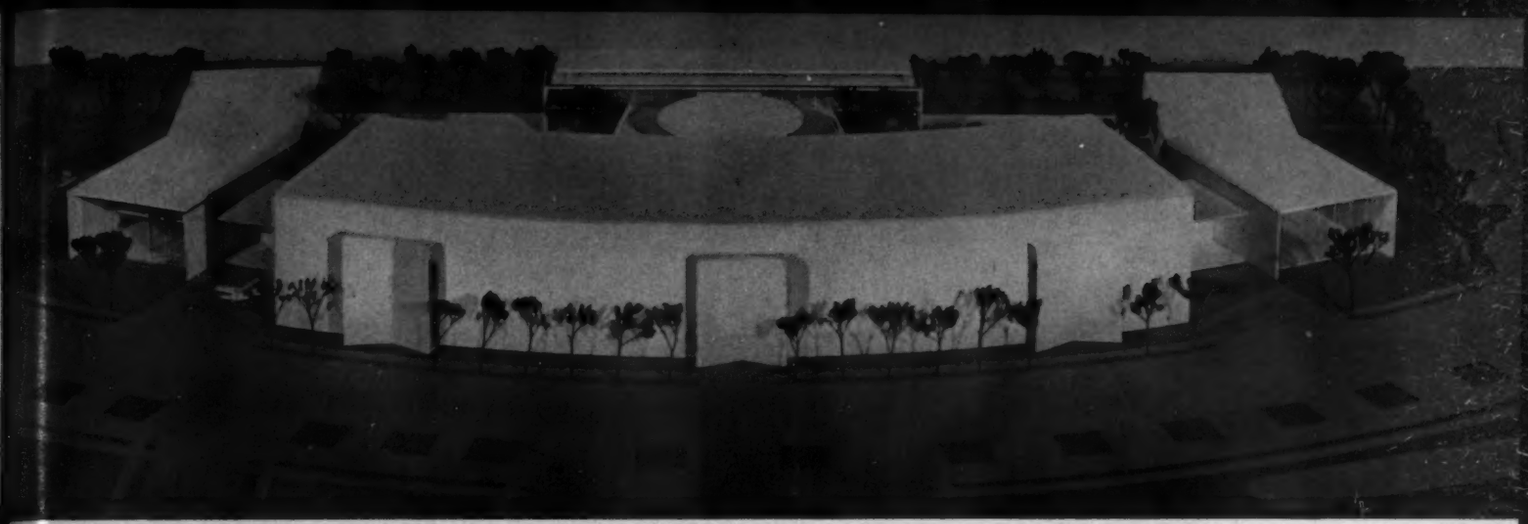


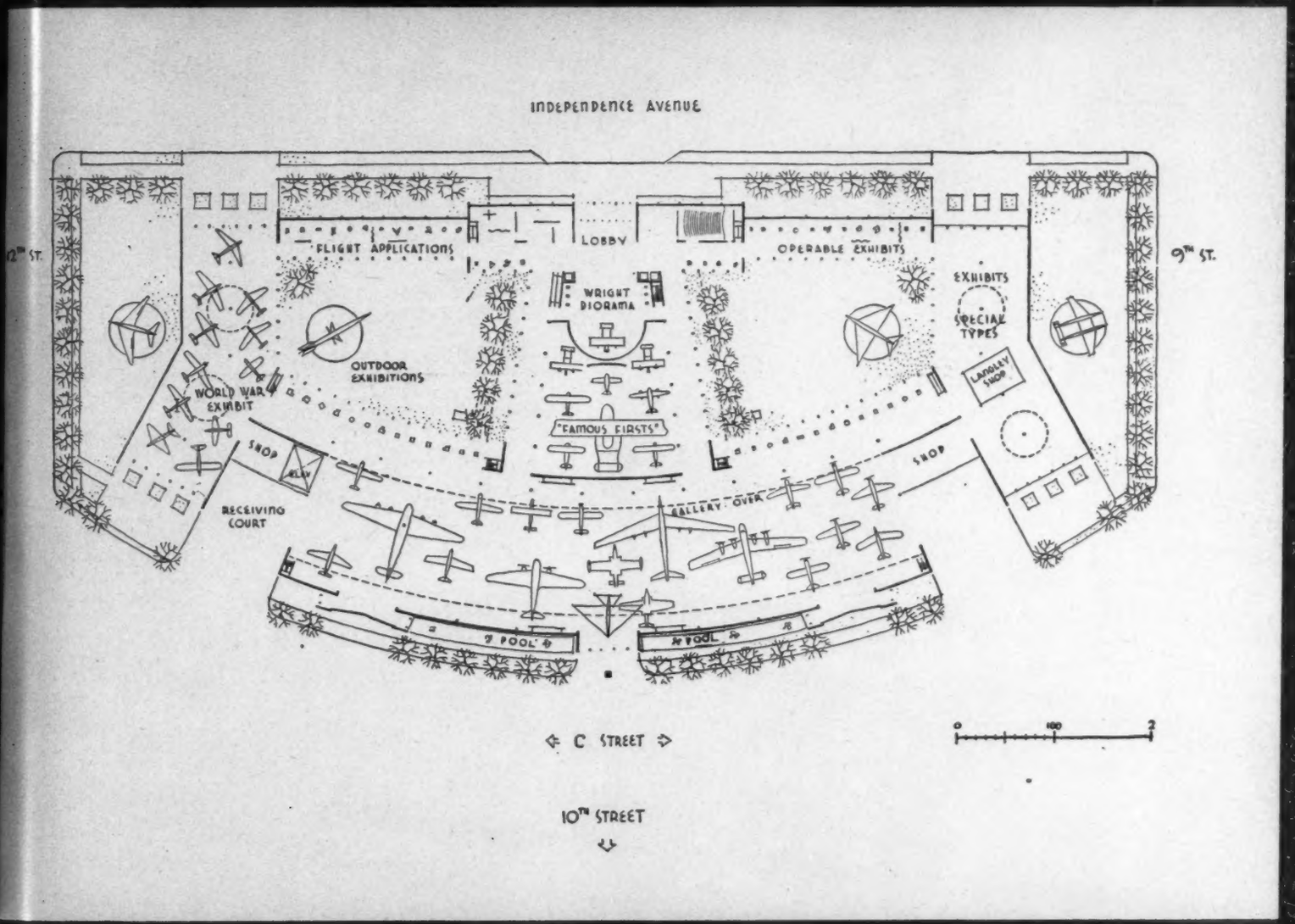
HOW DOES one house an exhibit airplane? Anne Lindbergh's "as little housing as possible" appealed to the architects of McKim Mead and White and their proposal for the National Air Museum attempts through varying the degrees of enclosure to avoid excessive confinement while affording adequate protection.

The building has been conceived as a relatively neutral setting rather than an exhibit in itself. New and short-term exhibit planes may be shown outdoors with zoo-like moat protection.

The size of the spaces created problems in scale which have been resolved through locating the smaller elements along the approach from Independence Avenue where existing buildings are relatively small and larger elements to the south in harmony with the larger buildings proposed for that area's eventual development.

The several levels of the entrance unit will house: offices and aeronautical library in the penthouse fourth floor; industrial displays opening onto the third floor




INDEPENDENCE AVENUE
12TH ST.
9TH ST.
FLIGHT APPLICATIONS
LOBBY
OPERABLE EXHIBITS
WRIGHT DIORAMA
EXHIBITS
SPECIAL TYPES
OUTDOOR EXHIBITIONS
LANGLEY SHOP
WORLD WAR I EXHIBIT
"FAMOUS FIRSTS"
SHOP
SHOP
RECEIVING COURT
GALLERY OVER
POOL
POOL
C STREET
0
100
200
10TH STREET



NATIONAL AIR MUSEUM

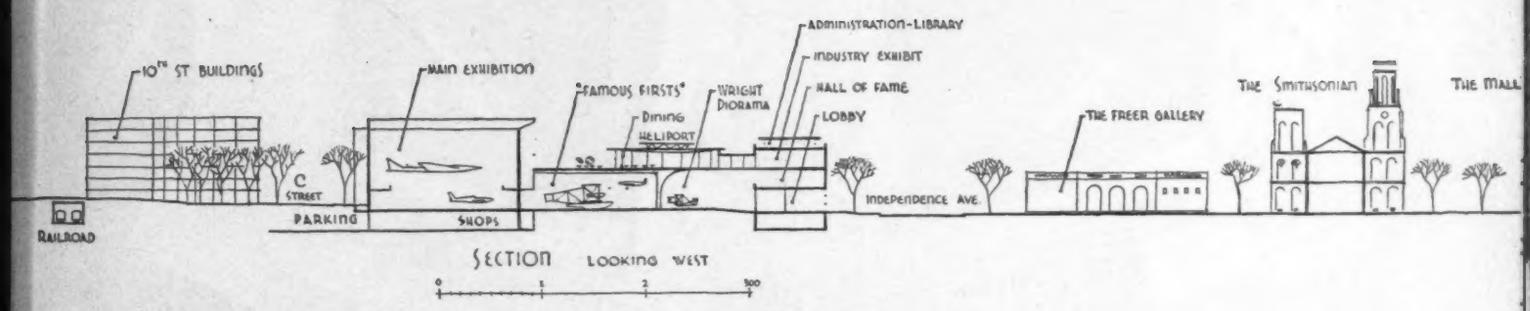
The Smithsonian Institution



roof terrace and restaurant; a second floor exhibit hall; and a ground floor organized for briefing visitors on what they may expect to find and do in the museum. Those with limited time can see in models and pictures the story of the air's conquest and films and video facilities will assist in making of this a visual card catalog of the museum collection.

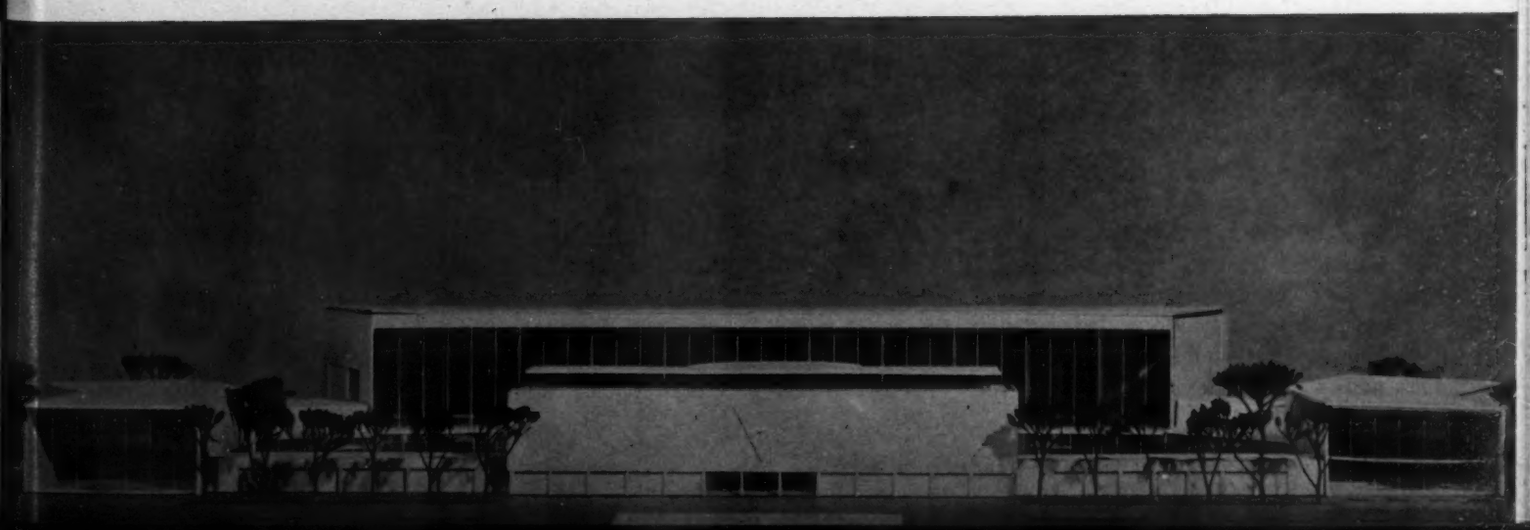
Straight ahead of the entrance and visible to passers-by Wright's "Kitty Hawk" will be exhibited as it was in the moment of first flight. Beyond this the Hall of Famous Firsts will be flanked with garden exhibition spaces, and will terminate in the main exhibition room where the bulk of the aircraft collection will be displayed in a space 600 by 160 by 80 ft high. From the floor or elevated moving sidewalk galleries, the suspended planes will be seen against the background of walls curved to invite the sensation of extension. Daylighting from the north will be augmented by a luminous ceiling screening the plane-handling and servicing equipment located in the truss space.





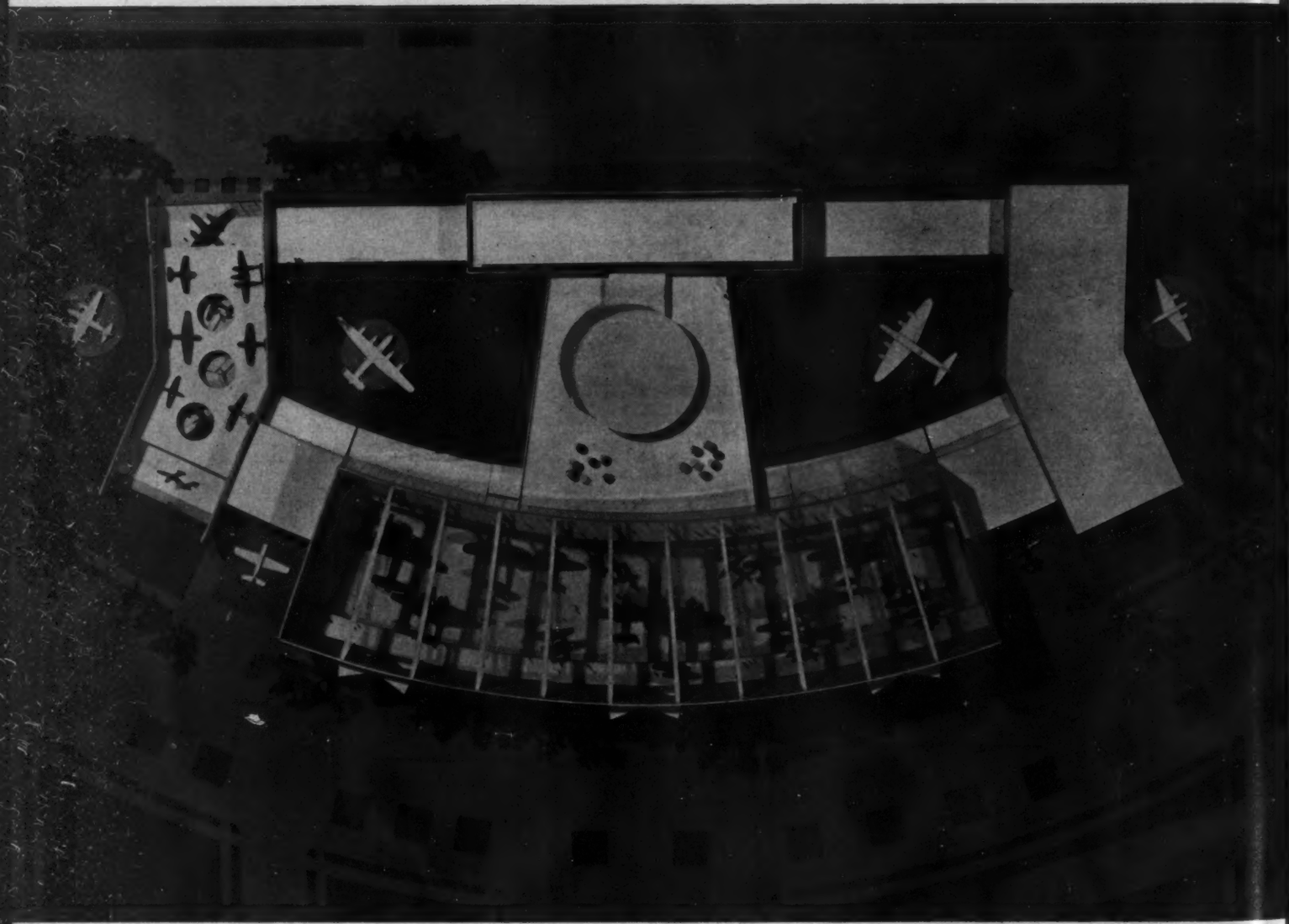
SECTION LOOKING WEST

0 1 2 100



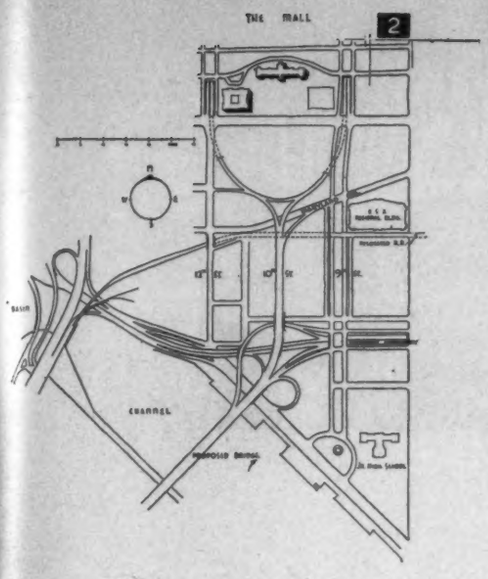
NATIONAL AIR MUSEUM

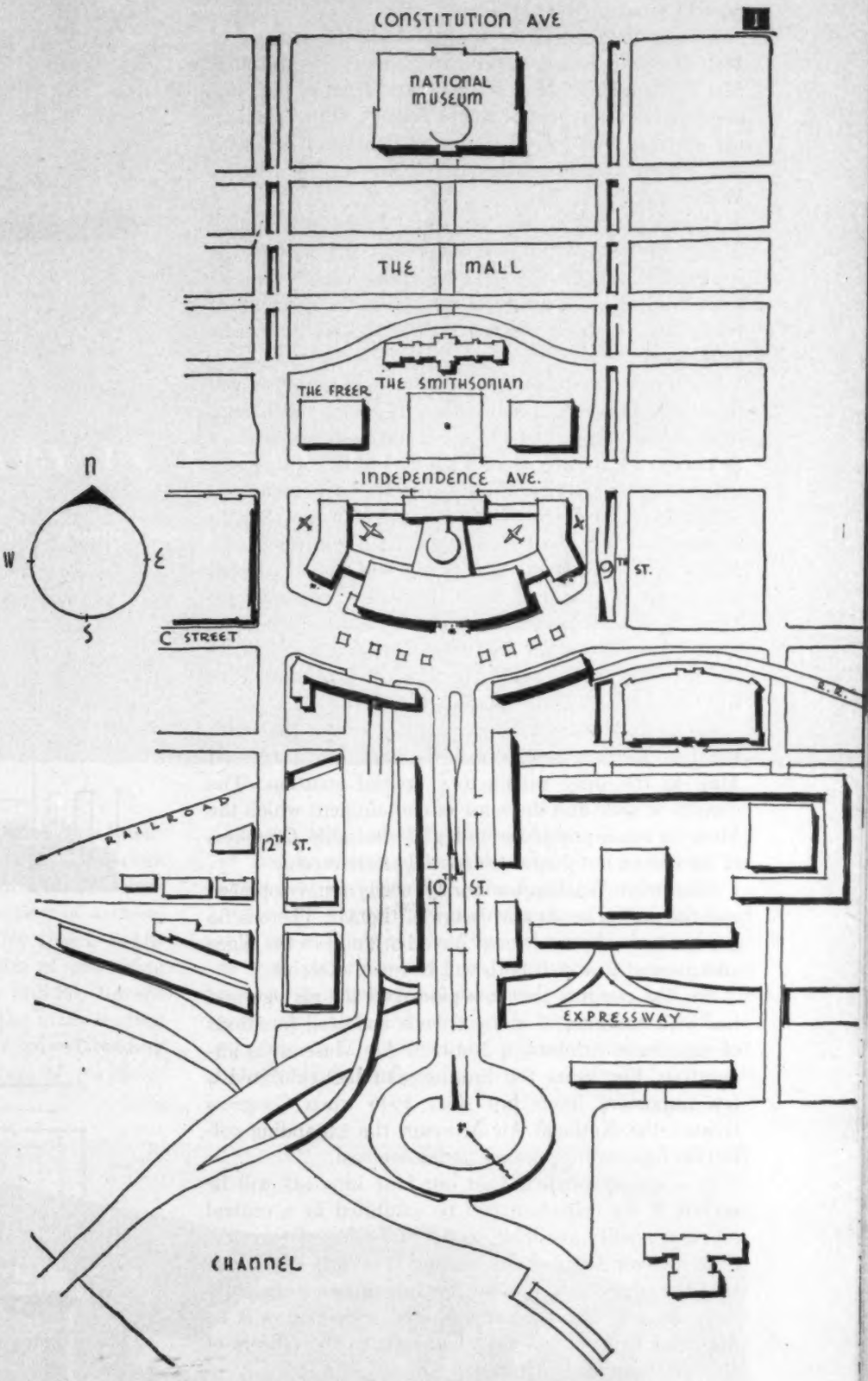
The Smithsonian Institution



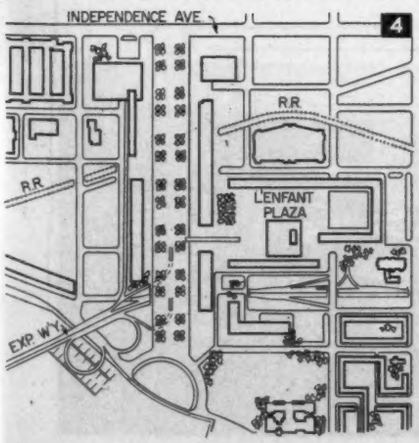
The site proposed for the National Air Museum (No. 1 opposite) is a plot that has for some time been tentatively assigned for the use of the Smithsonian. This location facing the Smithsonian with the flanking Freer Gallery and Arts and Industries Building is highly desirable for the proposed museum in terms of its administrative convenience and the convenience of visitors to the various collections. Interestingly the court which the museum would complete is the site of early experiments of Langley, the third Secretary of the Smithsonian. The proposed plot is the only one in the near vicinity large enough to accommodate the building.

Erection of the museum here would be in keeping both practically and esthetically with existing buildings and with longstanding plans for this area and its traffic handling. In the "wineglass" pattern (No. 2 opposite) which has characterized many of the traffic studies made by the National Capitol Planning Commission, the Air Museum would be located in the cup of the glass between 9th and 12th Streets with its curving south


THE MALL
2
CHANNEL


CONSTITUTION AVE
1
NATIONAL MUSEUM
THE MALL
THE FREER
THE SMITHSONIAN
INDEPENDENCE AVE.
9TH ST.
C STREET
RAILROAD
12TH ST.
10TH ST.
EXPRESSWAY
CHANNEL
N
W
E
S


INDEPENDENCE AVE.
3
RR
RR
EXP W'Y


INDEPENDENCE AVE.
4
RR
RR
L'ENFANT PLAZA
EXP W'Y

wall paralleling the arc of C Street. The stem of the glass is 10th Street extending from C Street to the proposed Potomac River crossing.

A current proposal for the development and use of 10th Street threatens the construction of the Museum. Mr. William Zeckendorf of Webb and Knapp, Inc., has made the development of a 10th Street "Mall" opening uninterrupted into the L'Enfant Mall a condition of his firm's participation in the redevelopment of Southwest Washington.

Drawing considerably on the "Justement-Smith" Study (No. 3) for the redevelopment of this area the Zeckendorf scheme (No. 4) hopefully emphasizes its "South Mall" as a means of attracting the quantity of traffic and occupancy necessary for the kind of profit sought here.

Since it is inevitable that Southwest Washington will be adequately developed whether by Webb and Knapp or others, it is hoped that Congressional officials will not be unduly swayed by the Zeckendorf Mall contingency if it precludes erection of the National Air Museum.

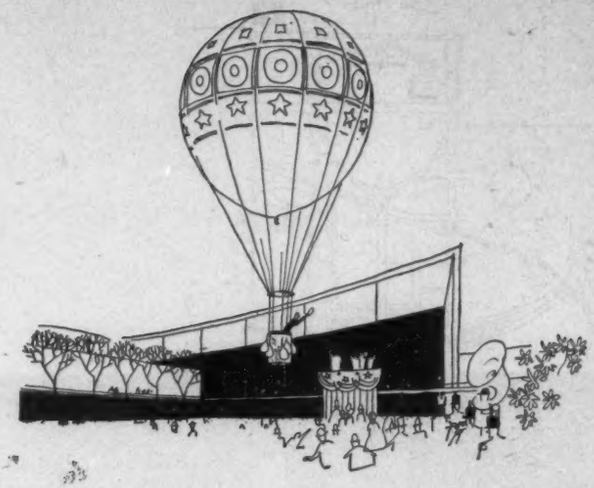
Dr. Leonard Carmichael, Secretary of the Smithsonian, and Mr. Paul E. Garber, head curator of the National Air Museum, the thoughtful and dedicated custodians of the collection, feel the proposals are not mutually exclusive. These men recognize Southwest Washington's need for redevelopment and believe that the museum will provide the kind of attraction that will support Mr. Zeckendorf's undertaking.

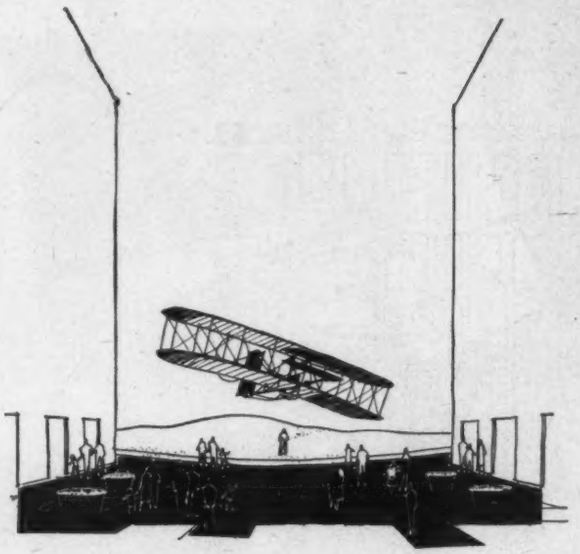
Certainly it cannot be successfully argued that with the humpbacked profile of 10th Street the open end Mall is the only satisfactory spatial solution. The quality of scale and the sense of containment which the Museum could provide seem highly desirable. Openness of itself does not guarantee spatial effectiveness.

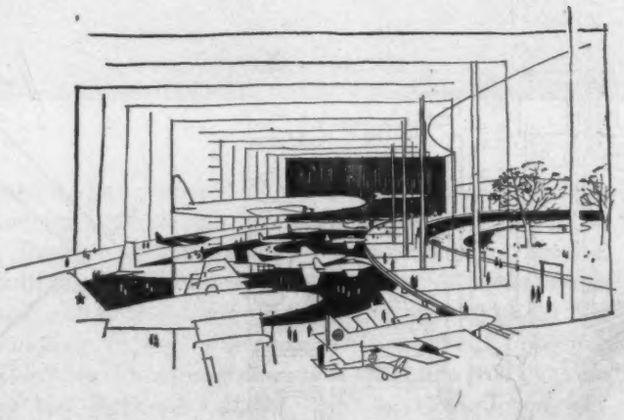
Southwest Washington sorely needs redevelopment and the nation needs a Museum of the Air. There is no good reason why we cannot have both and in the place and manner in which both will be most effective.

For the country that has pioneered the air age and has with the help of many friends collected hundreds of significant exhibits, a National Air Museum is imperative. For years the Smithsonian has exhibited a few important items but since 1946 when Congress created the National Air Museum the expanding collection has never appeared under one roof.

It is simply obvious that our best interests will be served if the collection can be exhibited in a central location readily available to the inpouring of travelers from all over America and abroad. It is earnestly hoped that the educational and national significance of a skillfully housed and centrally located collection will be apparent to Congress as it has been to the officers of the Smithsonian Institution.









BRANCH LIBRARY IN A SAN FRANCISCO PARK

Marina Branch, San Francisco, Calif., Public Library

Appleton & Wolfard, Architects

Lawrence Halprin, Landscape Architect
Ira S. Kessey, Structural Engineer
George K. Brakaw, Mechanical Engineer
Charles A. von Bergen, Electrical Engineer

THE NEW Marina Branch of the San Francisco Public Library is built in the southeast portion of a park and recreation area, Funston Playground, half a block from a shopping center, at an intersection of a cross-park pedestrian walk. The least desirable view is to the north and west; this and the direction of prevailing winds caused the designers to open the building toward the south and east. The glass wall of the main reading room (photograph above) fronts on a paved reading terrace and beyond, a pleasant expanse of playfield. Also abutting on the reading terrace is the glass wall of the browsing room; this wing is screened by an arbor and "see-through" planting, the intent being to invite the passerby to the warmth of a fireplace and upholstered furniture within, yet not to create a commercial show window. In plan, the interior public spaces open generously into one another, and at the same time, they are set apart by the structure. Offices, etc. are small cubicles; the public rooms are divided only by book shelving.



Phil Fein



1



2



3



4

Phil Fein

1, Entry. 2, Glass walls of reading and browsing rooms overlook paved terrace and, through a screen of trees, acres of lawn and playfield. 3, Brick wall screens less desirable view to west. 4, Charge desk. 5, Translucent plastic panels diffuse fluorescent light, reading room. 6, Browsing room fireplace, seen through floor-to-ceiling glass wall, invites passers-by. The simple structure is exposed inside and out: roof of laminated 2 by 4 and 2 by 6 planks, alternated, on laminated wood beams; masonry walls of reinforced brick; concrete floor slab on grade, with rubber tile finish. Children's area, adjoining the charge desk, has acoustical tile ceiling; so do office areas. Radiant heating is installed in the floor slab. Supplemental convectors are placed at the bottom of all glass wall areas. Service entrance is on the west side, where the view is unimportant

SAN FRANCISCO BRANCH LIBRARY

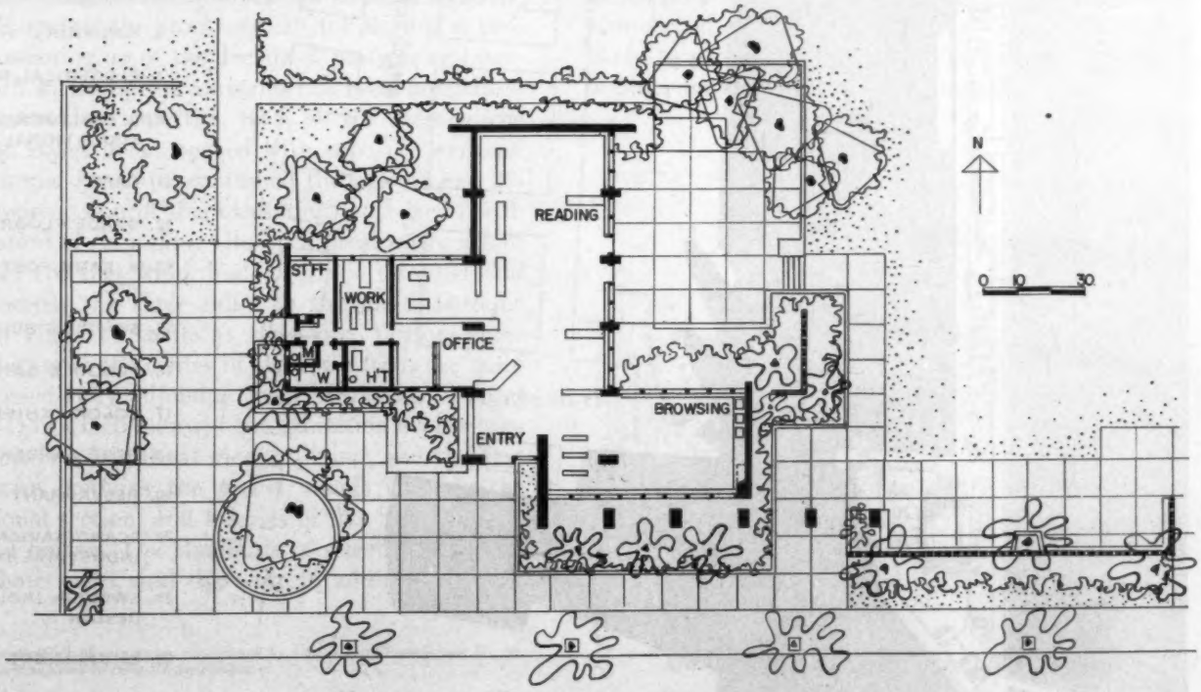
5



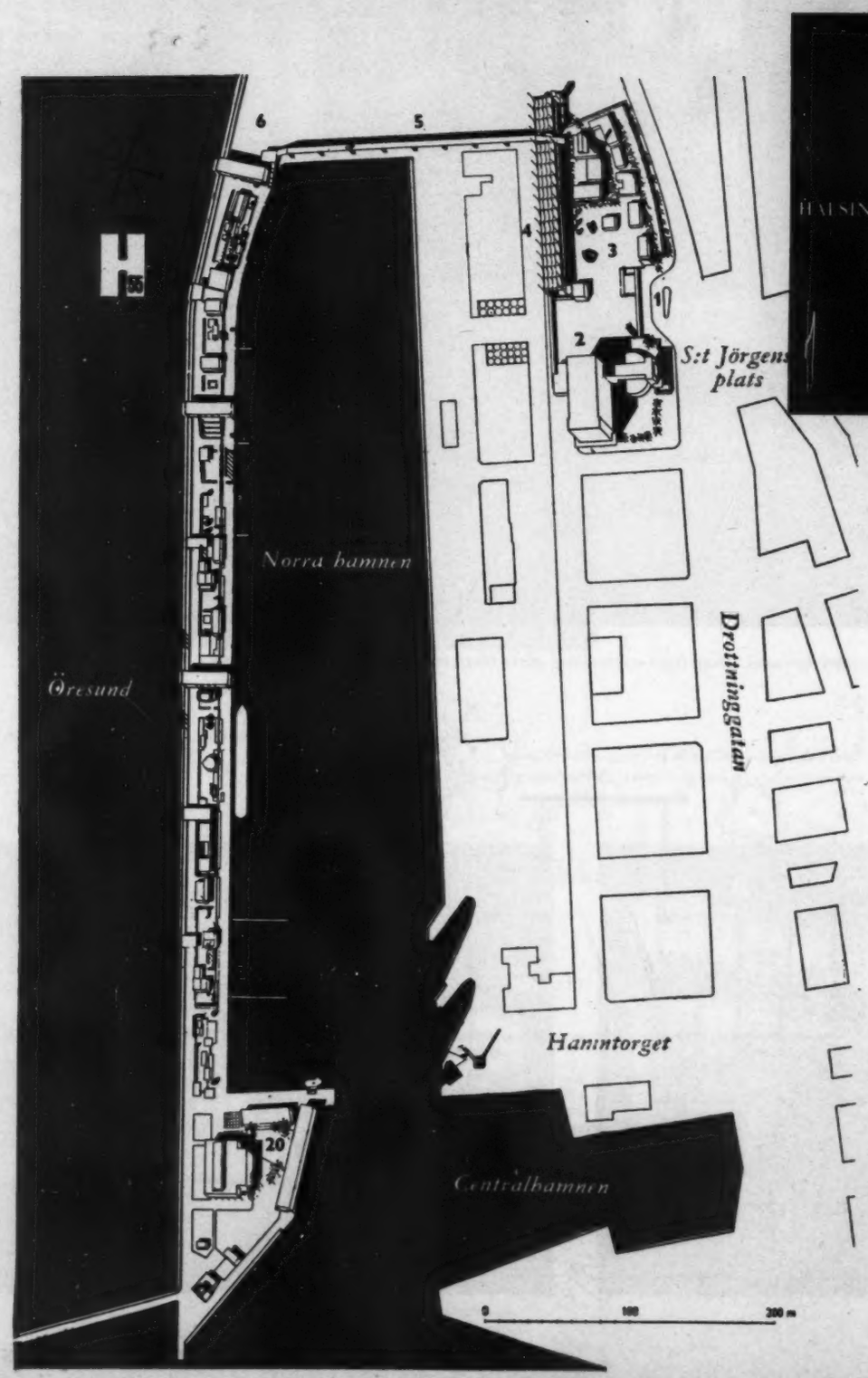
6



Reading room is divided by cases. Note light-controlling glass block clerestory above charge desk







1. MAIN ENTRANCE
2. CONCERT HALL
3. HOUSING SECTION
4. INTERNATIONAL FURNISHED APTS.
5. BRIDGE
6. FUN-FAIR
7. ELECTRICAL BUILDING
8-10. CHILDREN'S AND EDUCATIONAL SECTION
11. CAFE
12. DANCE FLOOR
13-14. BANK, POST OFFICE, ETC.
15. SHIPPING BUILDING
16. PERGOLA GARDEN
17. COLOR EXHIBIT
18. ROSE GARDEN
19. RESTAURANT
20. SCANDINAVIAN INDUSTRIAL DESIGN
21. SWEDISH INDUSTRIAL DESIGN
22. CHURCH ART



SWEDEN: FORMULA FOR A SUCCESSFUL EXHIBITION

Helsingborg Fair

Carl Axel Acking, Bengt Gate, Torbjörn Olsson, Sven Silow, Architects, general layout and design

by Frederick Gutheim

THIS SUMMER'S DESIGN EVENT in Europe was the Helsingborg exhibition, unquestionably the most important fair produced by the modern movement, and the postwar exhibition of the greatest design significance. Produced under the direction of the Swedish Industrial Arts Society, which contributed the unique services of its director, Ake A. Huldt, to manage the exhibition, a broader-than-national fair has resulted. All the Scandinavian nations are represented in the international section which opens the fair, and all are represented in the arts and design section which closes it. The international section itself takes the form of a series of completely furnished exhibition houses, with small housing and planning exhibitions included, and by itself is the first opportunity to compare postwar design trends not merely in architecture but in housing and interior design. The exhibition self-consciously measures itself against the Stockholm 1930 Fair, and it provides a summing up of the decade of postwar architecture which in European countries has been dominated by reconstruction activities. H55, as the Helsingborg exhibition styles itself, opened with capacity weekend crowds in mid-June and continued through August 28.

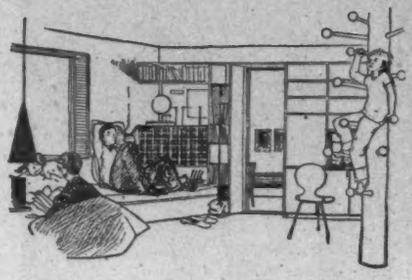
Any appreciation of this exhibition must begin with a description of its unique site on a breakwater a half mile long, 100 feet wide, high over the Öresund and looking across the three miles to the green baroque towers of Hamlet's castle at Helsinore. Visitors enter the exhibition in the center of the town from the main street immediately adjoining Sven Markelius' concert hall (1931) in which many of the exhibition events take place. This is a fair about modern living, and the first exhibit area contains the model houses forming the international section, and a series of five Swedish prefabricated houses. The standards of selection are very high in both cases, and there are in addition exhibits showing an atrium house (organized around a patio), a full sized demonstration on how to modernize 1919 workers' coöperative housing (more baths, better kitchens, more storage), and an exhibit on what to do with basement space in your house. This section is done with the greatest skill and the most rigorous selection of materials. Postwar trends in evidence are the demand for family rooms, for informal living, hobbies, music, sewing and other pursuits; the impact of the automobile and of suburban living habits; and the warmer, more colorful, more individualistic approach to housing than the formalism or dogmas of prewar architecture allowed.

The influence of American ideas in housing is pronounced, but our failure to participate in this exhibition should not be regretted. Had we sent the best of our architect-designed prefabs as our Department of Commerce proposed, it would have been confused with the commercial prefab exhibit, and would not have been likely to win favorable recognition among the displays of other nations.* As the exhibition stands, it is clearer



Main entrance is beside Markelius' famous concert hall

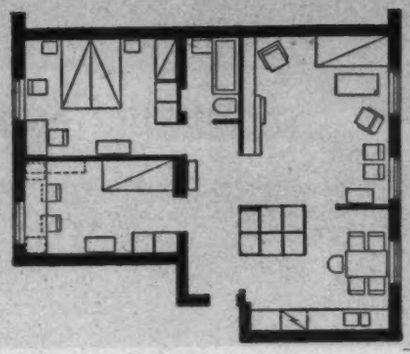
* *Buckminster Fuller's plastic dome, constructed by students at Washington U., St. Louis, was not completed in time for the exhibition.*



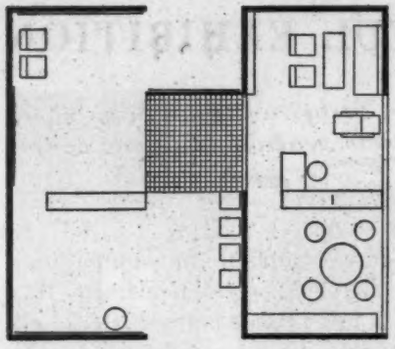
Among housing trends, the family room



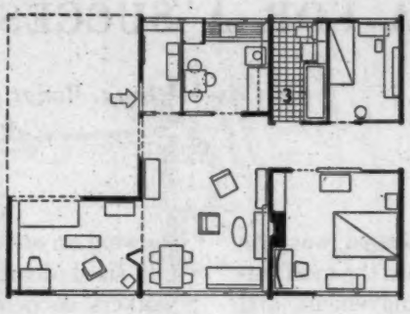
Housing Section



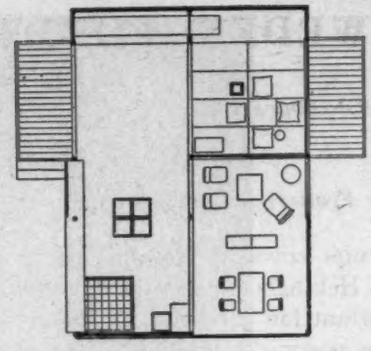
Apartment, Swedish



Apartment, Swiss



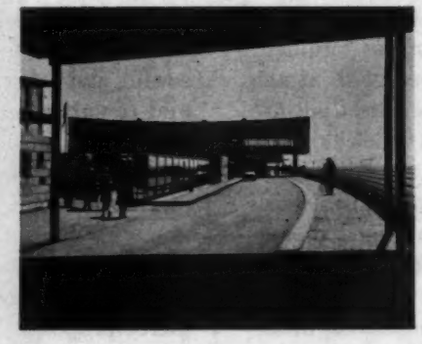
Apartment, British



Apartment, Japanese



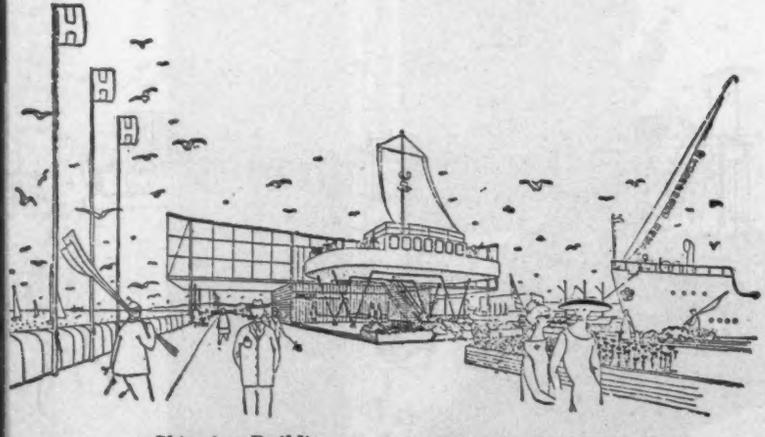
Booths with gay umbrella roofs



Three principal buildings are on stilts



Interior, Bar 55 *cafeteria*



Shipping Building

that there is in Europe a generally accepted standard for middle class housing, and that the predominant influence is the American conception of family life, the open plan, more informal servantless living, mechanization of all household services, abundantly equipped and efficiently planned kitchens, and an entire catalog of similar characteristics.

These national housing displays are arranged in a long row under a white canvas roof. Some are walk-through; others are designed to be seen from glass exterior walls or through windows and one — the Japanese contemporary house, hit of the exhibition — from a porch. In the end it is not the individual house that matters but the comparison, and the group as a whole.

From the housing and planning section, visitors cross the harbor on a high foot-bridge from which there are fine views of the exhibition. The major part of the fair



All three principal buildings span the whole width of the pier; between them are smaller pavilions through which the crowd flows. Above, Bar 55, *popular priced cafeteria*

H 55

on the breakwater is dominated by three principal exhibit halls, stretching from one side to the other, and punctuating its length. Under their identically formed concave roofs are exhibitions on electrification, shipbuilding and an excellent popularly priced cafeteria, the Bar 55. Between there are smaller pavilions and outdoor exhibits dealing with children's playgrounds and schools, the expanding use of color, travel and outdoor living. This section of the fair is also peppered with small gardens of different types and sizes, souvenir and refreshment stands of uniform design, dance floors and bandstands, and small restaurants. These have been realized almost uniformly with concrete block walls painted white; concrete, asphalt, plank or sand floors; corrugated transite, plastic or lightly built-up roofs on wirework joists, and the simplest electrical installations. The slope of the breakwater is exploited to get changes in level, and there are few places from which one can see the exhibition as a whole. Black and white buildings and walls are relieved occasionally with colored awnings, streaming flags, or brilliant masses of flowers.

The great restraint in form and color allows the most to be made of sparkling sun, blue waters, the lively passing marine parade on sound and in port, and the constantly changing sky and light of the Öresund. The exhibition constantly reminds you of these, whether you are outside or in the exhibition halls that seem actually to overhang the water. These are the characteristics that etch themselves in imagination and memory, and they are embodied in the single permanent building of the exhibition — the Parapeten restaurant designed by Bengt Gate, probably the most important Swedish architect of today.

The restaurant is on the second floor of the building



Interior, Shipping Building



Volkswagen pavilion: vaulted canvas roof supported by intersecting wires



Parapeten Restaurant



Swedish industrial arts . . .



. . . freely exhibited



Exhibition, color principles and use



Interior, Parapeten Restaurant



Swedish glassware, Kalmar Glasbruk

whose lower levels are occupied by coat checking, bars, a small shop and the usual food reception and storage facilities of a restaurant. The restaurant itself is wrapped around the kitchen and achieves views on four sides. Its 450 seats are divided into such varied accommodations as the main salon with its dance floor, an enclosed veranda overlooking the Öresund, open balconies, or three rooms which can be separately enclosed for private parties. The second floor contains another bar as well as the kitchens.

The main room ceiling is a half-arch terminating in a louvered wall of birch strips which has light filtering and acoustical functions. There is an appropriately gay and colorful mobile. In every direction at eye level, but with the greatest care to control the glare from sky and water, you see the sound and the port. This half-million dollar building in white Swedish marble is a relief from the "fisherman's wharf" type of place where an accretion of synthetic marine effects and properties (fish nets, dried or varnished fish trophies, life preservers, lines, etc.) smother the very atmosphere of the sea. In San Francisco, Washington, or along the New England coast, one longs to scrape these places to the natural cleanliness once characteristic of the best waterfront restaurants. But even more, one should long to create even a few places of the standard of the Parapeten, where architecture enhances the site and improves the food.

At the end of the New York and San Francisco World's Fairs, it was pretty clear that the "universal and international exposition" as it had been formulated in the 19th century was through. The Belgians are trying to do it once more in Brussels in 1957, but the dice



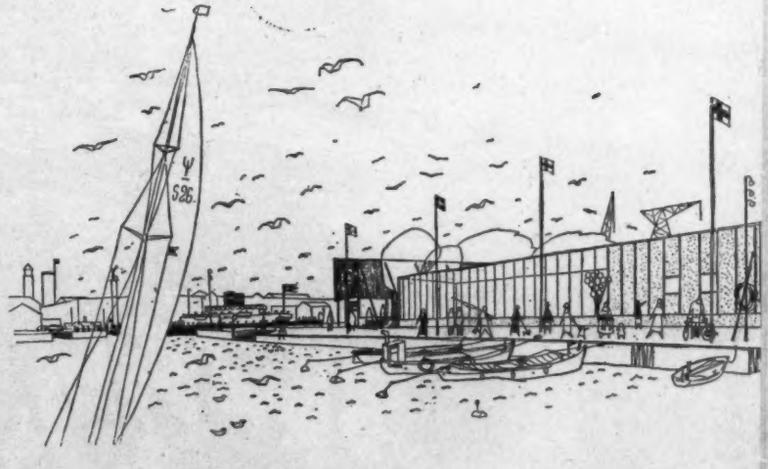
Electrical Building, above, is one of the three main structures; this and the Shipping Building emphasize subjects of great importance in Sweden

H 55

are loaded against success. What can be realized successfully today seems to me best illustrated in H55 as earlier in the Zurich exhibition of 1940: a small, specialized exhibition with a tourist accent.

The recipe for such a fair is to keep it small enough to maintain design control and clarity, to keep it fresh and to counteract tedium. It ought to exploit some local urge, some anniversary. And it needs all the executive talents and resourcefulness of a symphony conductor, an opera director, or a festival manager, who can conceive, plan, direct and control the total enterprise.

The Helsingborg Fair is a success because these conditions are present. Its unique site, its brilliant and natural circulation scheme, its reasonable scale allow it to be realized with the simplest materials and methods and still reach levels of distinction that are rarely attained.



MILAN TRIENALE PRODUCES IDEAL SHOWCASE

G. Minoletti, M. Tevarotto, R. Zavanella, Architects

THE TENTH TRIENALE OF MILAN included a number of unusually interesting structures, among them this small pavilion which won the first prize in international architecture.

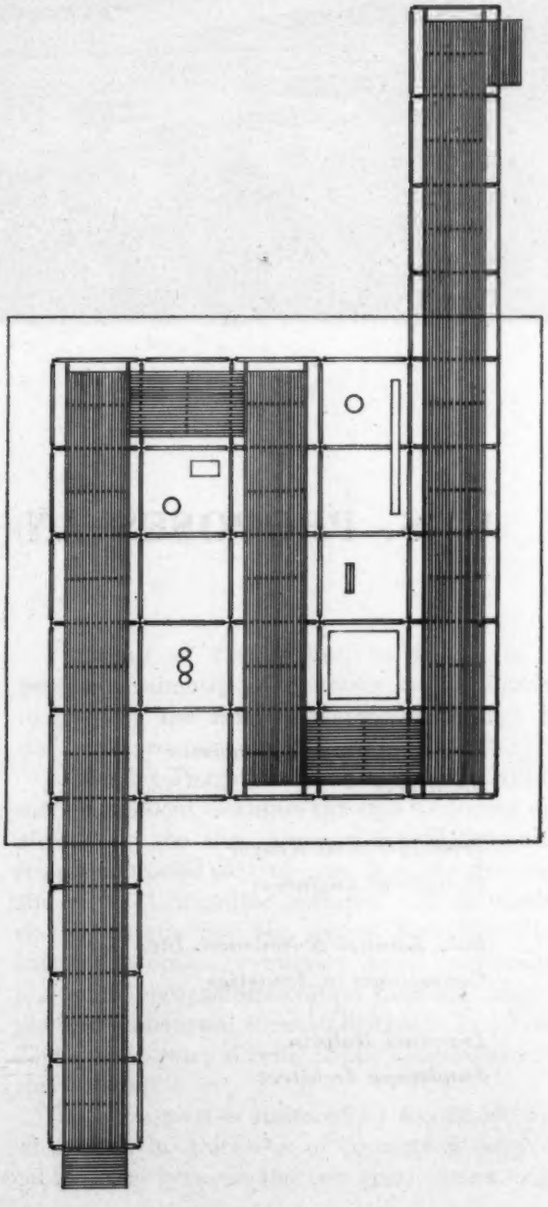
The pavilion, designed for an Italian shipping company (the Finmare e della Finmeccanica), is virtually a "showcase" passage from one side of the lake to the other. Steps at each end connect via a long gangway with a central roofed portion (corrugated iron roofing) with wall panels of wood which serve both as stiffening agents for the central structure and as display areas. The "double-U" walkway makes it all but impossible for pedestrians to by-pass the exhibits — a happy situation indeed for the exhibitors.



Vertical iron stanchions are joined by iron cross-pieces along the entire walkway; wood panels are demountable. The organizing module is a square, 2.80 by 2.80 meters. Wide overhang of roof protects exhibits in bad weather









U. S. PROPOSES AN INTERNATIONAL CONFERENCE

Hugh Stubbins & Associates
Architects

Severud-Elstad-Kruger
Structural Engineers

Bolt, Beranek & Newman, Inc.
Consultants in Acoustics

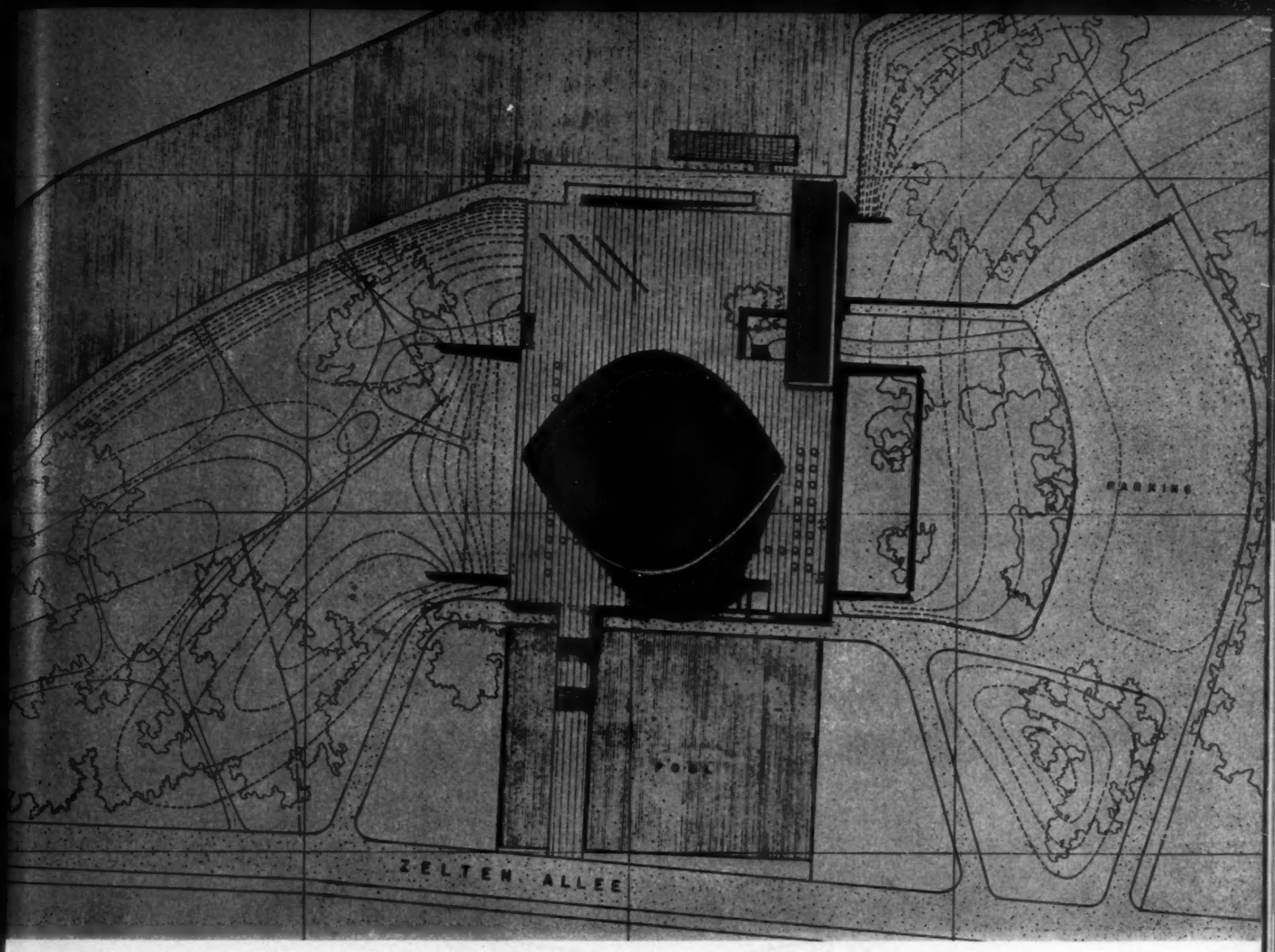
Lawrence Halprin
Landscape Architect

THIS LATEST ADDITION to the growing number of curved roof buildings by American architects has little else in common with them save imaginative daring.

Site, function and structural system are widely different and in the hands of the architect for this conference and exposition center, the design is uniquely and appropriately expressive of its own program.

This program, as well as the selection of the architect, was made for the United States Government by a special advisory committee of The American Institute of Architects at the request of the Department of State. As tangible expression of its support of West Berlin, our government proposed participation in that city's international building exposition which is to open in 1957.

After visiting Berlin with State Department officers and after discussion with German officials, the advisory committee, under the chairmanship of Ralph Walker,



AND EXPOSITION BUILDING FOR BERLIN

agreed that a conference and exposition building might constitute the most effective symbol of our belief in free communication and discussion of ideas. Thus a building was needed which could at one time both function effectively as a gathering place and clearly express the invitation to gather. In siting and in design the building gives every evidence of satisfying this demanding program. All parties to this experiment in socio-architectural relations deserve congratulations.

At what is very nearly the geographic center of the city, the 11-acre site lies on the bank of the Spree River at the edge of the great Tiergarten. Strategically the location is important, for though it is within the Western sector, it is both accessible and visible from the Soviet zone. In the immediate vicinity are the old Reichstag, site of the proposed new German capitol group, the Brandenburg Tor, and the 1945 militaristic Soviet Memorial.

Financing of the project, in which the building proper is estimated at $3,000,000, will be accomplished in part by the Berlin government through the new dollar aid program.

In the flat Tiergarten area the building will be given more prominent elevation through mounding up rubble already on the site. Approaches will be made easily from a depressed parking area, from the river, and from the park. Automobile entrance will be made under shelter directly into the ground floor which is organized for reception, exhibition, small conference rooms and conference administration facilities. Here, too, is planned a memorial room to Benjamin Franklin, whose 250th anniversary is being happily commemorated with this building.

The plaza level is sheltered by the 22,500 sq ft roof whose 2½ in. thickness of concrete is supported by cables hung between the two great arches and a con-



INTERNATIONAL CONFERENCE AND EXPOSITION BUILDING

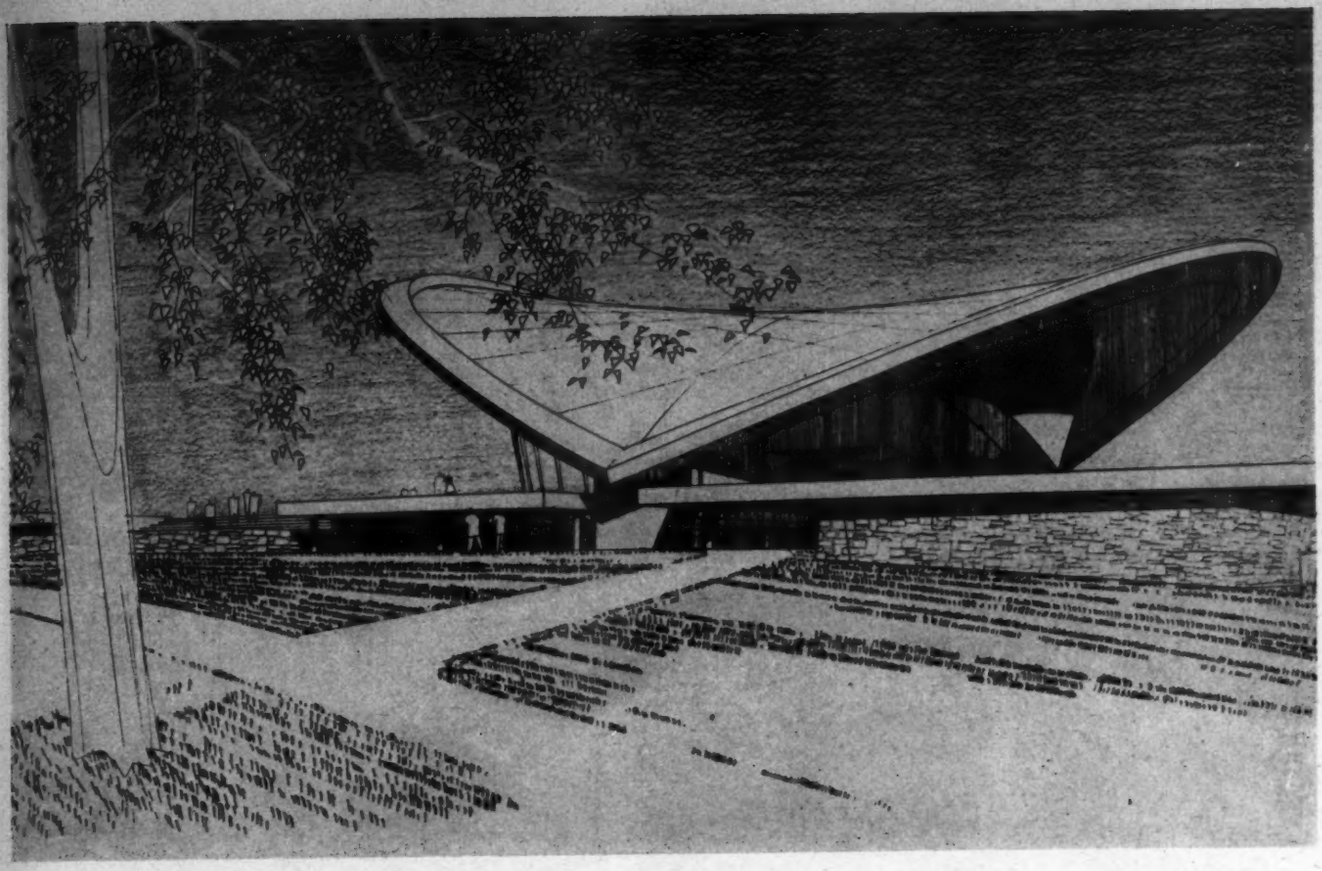
crete compression ring surrounding the auditorium. The arches are 280 ft long and at the tops are 60 ft above the plaza and 220 ft apart. Set back well within the shelter of the roof to allow the deep extension of welcoming and protecting canopies, the auditorium is placed above the plaza level. Within its 14,300 sq ft area, seating is arranged for 1200 in rows spaced 42 in. back to back to accommodate the frequent circulation typical of conferences. Multi-lingual translation, radio and television facilities are located above the floor and outside the auditorium proper in booths set far enough forward to remain operative even when the rear portion of the auditorium is closed off on the occasion of smaller conferences.

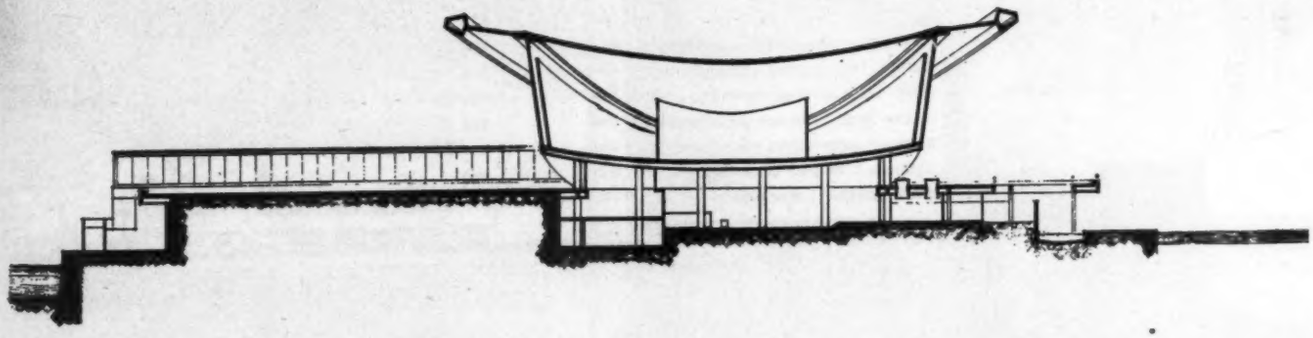
The curvature of the roof produced in this system of construction is naturally favorable to good acoustics through its distributive rather than concentrative form, and will presumably avoid expensive doctoring. State Department officers with long experience in conference problems find in the acoustics, seating, and careful handling of circulation, promise of an efficient and effective building.

Exterior walls of the auditorium may be finished in wood. Their red-based color with the white of the roof and the blue of the artificial pool opposite the river should be a relatively subtle symbol.

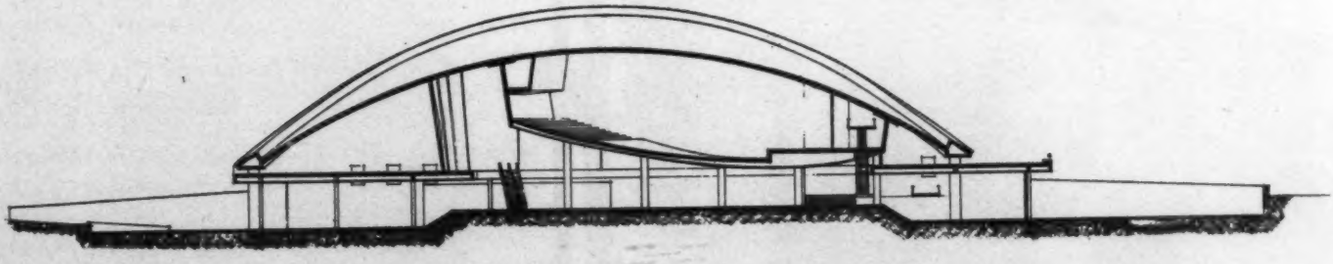
Three masts will carry the flags of the U. S., the city and West Germany. The low rectangular wing extending north from the auditorium contains permanent administrative and maintenance offices and terminates in an indoor-outdoor cafe.

This cafe along with easy access and the great sheltering canopy suggest that aside from its purpose as a place of official congress, this building will serve the ideal day-to-day function of a pleasant focus for the citizens of Berlin.

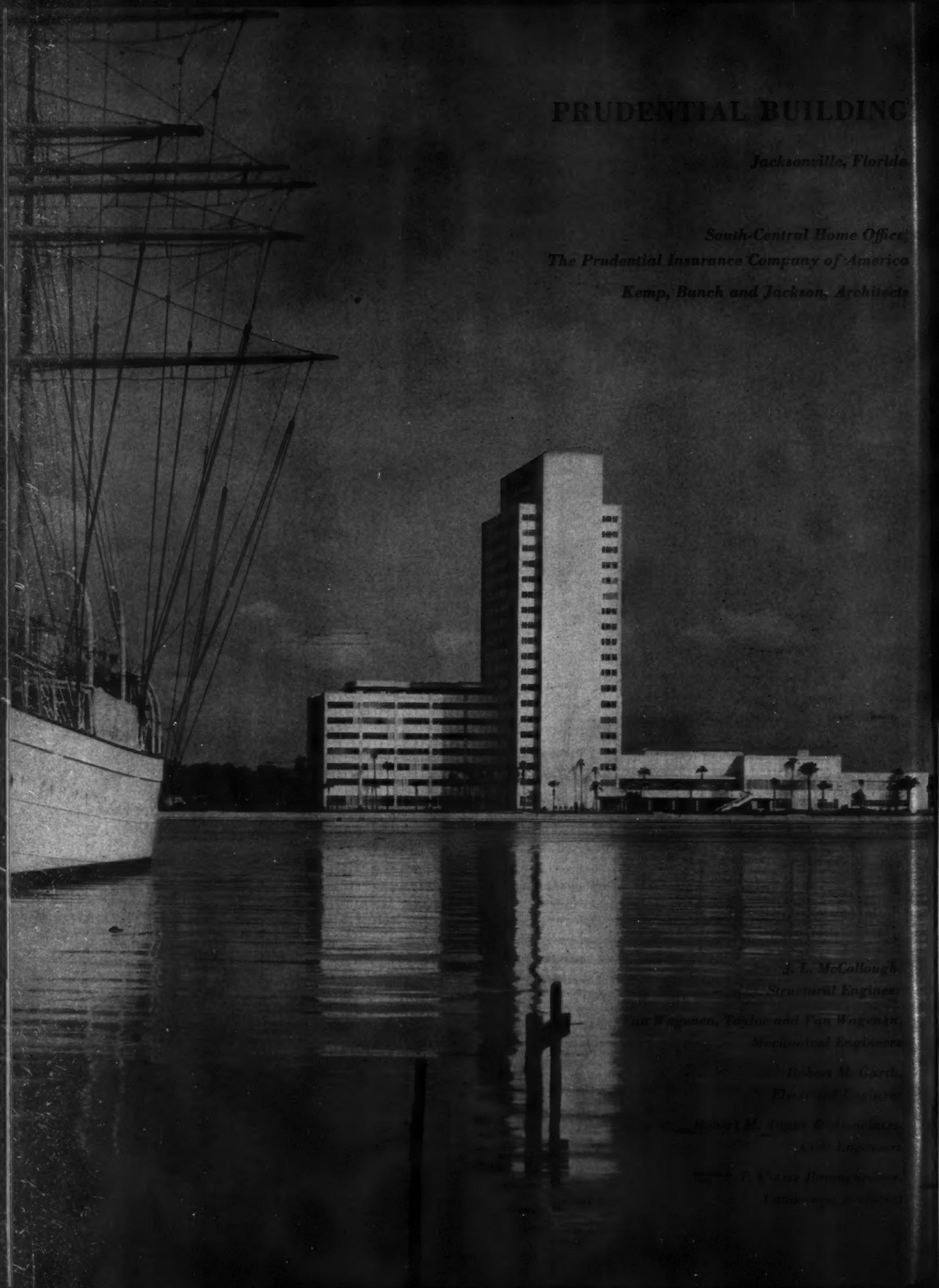




TRANSVERSE SECTION



LONGITUDINAL SECTION



PRUDENTIAL BUILDING

Jacksonville, Florida

South-Central Home Office
The Prudential Insurance Company of America

Kemp, Bunch and Jackson, Architects

J. L. McCollough
Structural Engineer

Van Wagenen, Taylor and Van Wagenen
Mechanical Engineers

Robert M. Gartin
Electrical Engineer

Robert M. Angas & Associates
Civil Engineers

J. Victor Hennessy
Landscape Architect



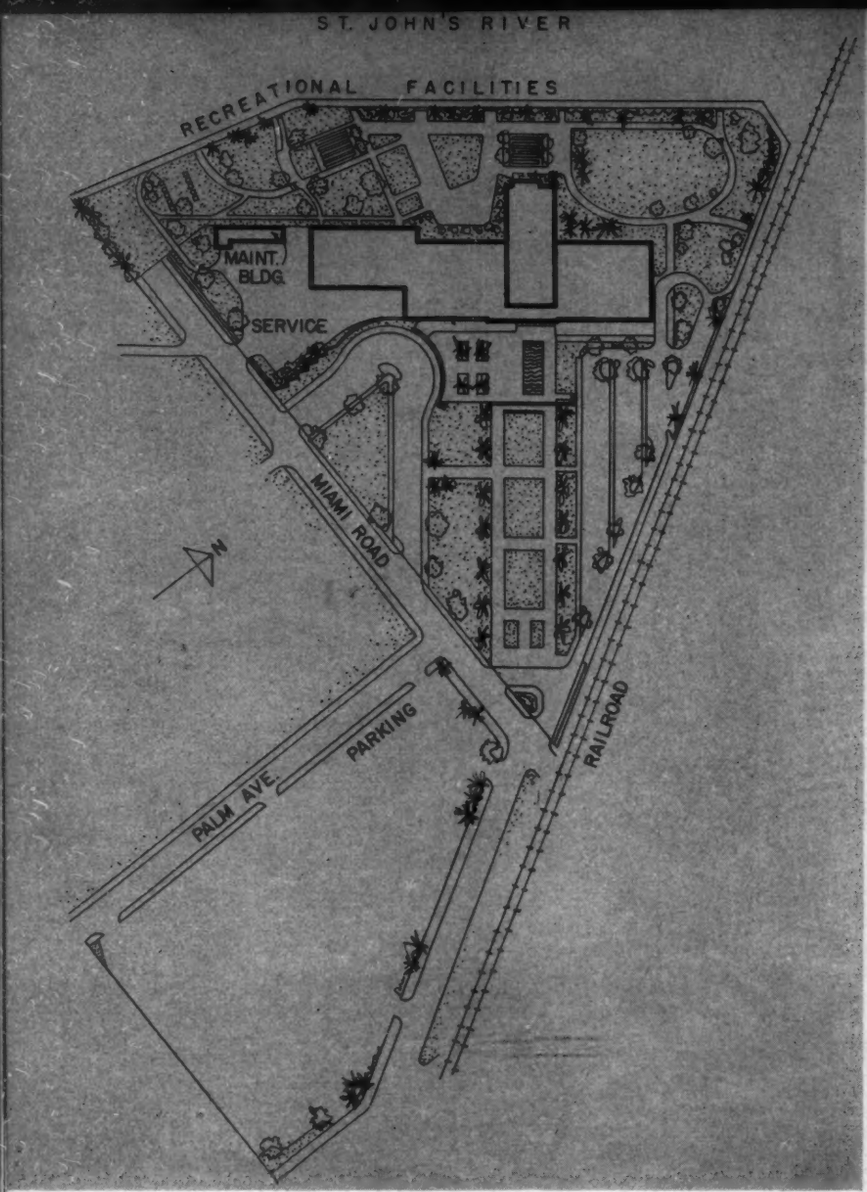
Aero-Pic

AS THESE PHOTOGRAPHS suggest, this building represents an interesting concept of an office building for an age of mobility. Here is space — breathing space, parking space, recreation space, planting space, not to mention working space — within reach of city services and advantages. This is Prudential's answer to the current problem of decentralization: a compromise between the congestion of downtown and the isolation of suburban or country locations. Carol Shanks, Prudential president, explains that if traffic and parking problems can be worked out, big business belongs in the city; it will even pay high city taxes for the services the city supplies. Prudential is currently decentralizing its national organization in five regional home office buildings, but the buildings are only semi-decentralized.

Design-wise, the building makes much of the space freedom it enjoys, inside as well as out. Spaciousness is noteworthy in lobby, employes' lounges, dining rooms, and office areas. The nineteen-acre site has been (or is being) expensively landscaped, from formal garden on the entrance side to all manner of lawn recreational facilities on the river side, and for parking.



Alexandre Georges (also opposite page)





PRUDENTIAL BUILDING

The architects developed several different schemes for building on the site — low, high, combinations. There was a definite desire for a tower, largely for its advertising potential; the site is central with respect to three main highways and a main railroad line, and a tower would be a monumental signboard on the river scene. The solution then is a high tower section (its space largely for rental), a lower section of larger area for Prudential's own offices, and a wing for cafeteria, lounges, auditorium and service facilities. The tower is oriented to present its broad side to the highways, and this decision had a bearing on the architects' study of sun control.



Alexandre Georges

One of the broad sides of the tower faces almost due south. So why not some kind of exterior sunshades? Some study answered that question in the negative. A wide variety of shading devices was considered, but all would be expensive; all would introduce maintenance expense. One factor in all this was high winds; another was the sea gull population. Nice strong concrete eyebrows, for example, would withstand the winds, but would prove a strong attraction for our feathered friends(?). Incidentally, this bird consideration was one of the strong reasons for keeping all exterior projections to a minimum; it even vetoed a suggestion to stock the reflecting pool with goldfish. In any case, the entire



building is air conditioned, and a little study soon indicated that increasing the air conditioning on the sunny side would be much cheaper, in both first cost and upkeep, than exterior sunshades.

Further, the tower itself could be made useful as a sunshade; notice (in the air view, page 187) that the tower is so placed as to shade the seven-story office wing during the working hours of the day and thus save substantially on air conditioning load.

It was clear, moreover, that no exterior sunshades would be of much help against the glare from the sky and the water (remembering that sky glare introduces solar heat even on the shady side). The glare factor dictated the use of sun-resisting glass on all windows, also textured finishes on the light aluminum vertical fins and sand finish for marble and stone, to minimize reflections.

Office areas were planned on a system of 5-ft modules (25-ft bay), so that subdividing can be arranged or rearranged with the least changes. A cellular steel floor system, topped with light-weight concrete, contributes much to this flexibility, the cells serving as electrical raceways. Lighting fixtures were designed to be easily movable; movable steel partitions are extensively used; and air conditioning outlets sized so that partitioning changes will not require air conditioning changes.

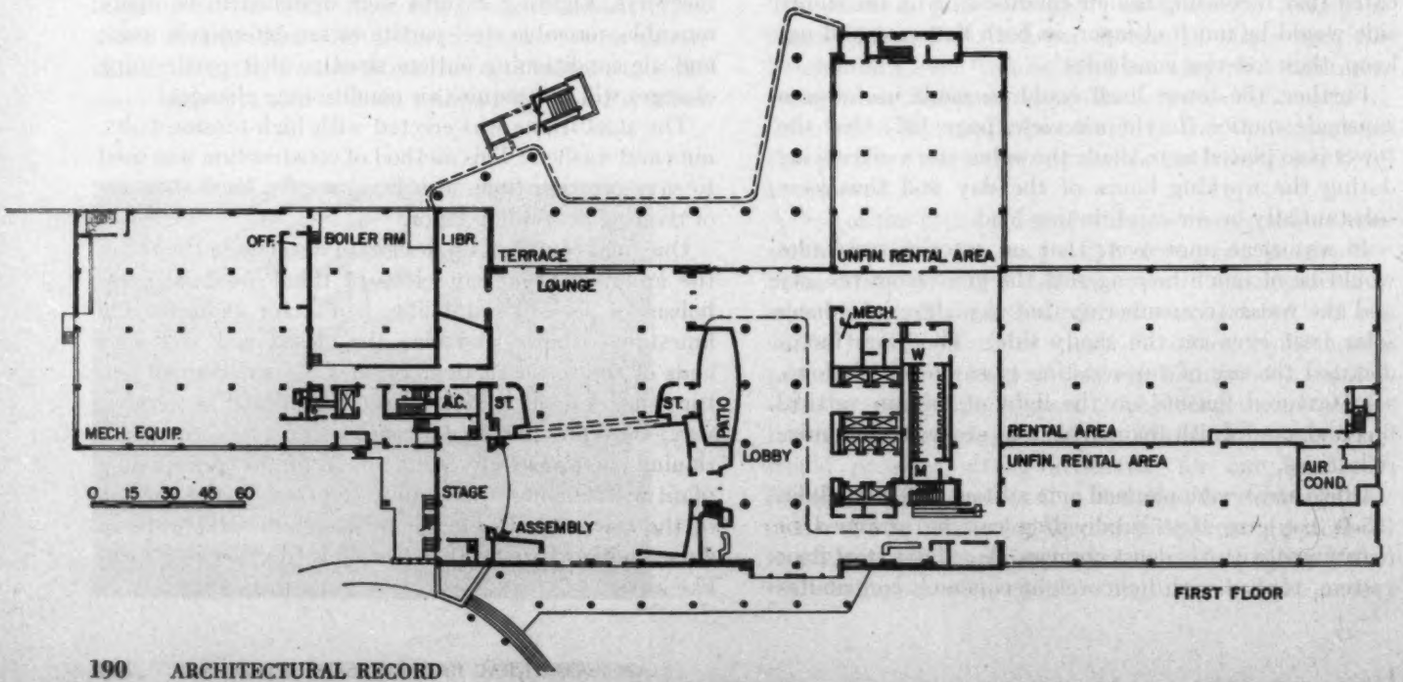
The steel frame was erected with high-tension bolts, nuts and washers. This method of construction was used to save erection time, also because of a local shortage of riveting or welding labor.

One final comment on design: in developing the tower the architects were conscious of the Prudential symbolism of rock-like stability, hence, for example, the limestone exterior and also the closed end and west ends of the tower section. Besides the sun-control feature these closed ends are quite functional in another way: they provide good space for necessary air conditioning equipment on each floor. Main air conditioning plant with cooling towers and compressors is at the top of the tower nicely hidden behind high solid walls of stone facing which tie the solid ends together in a rock-like aspect.



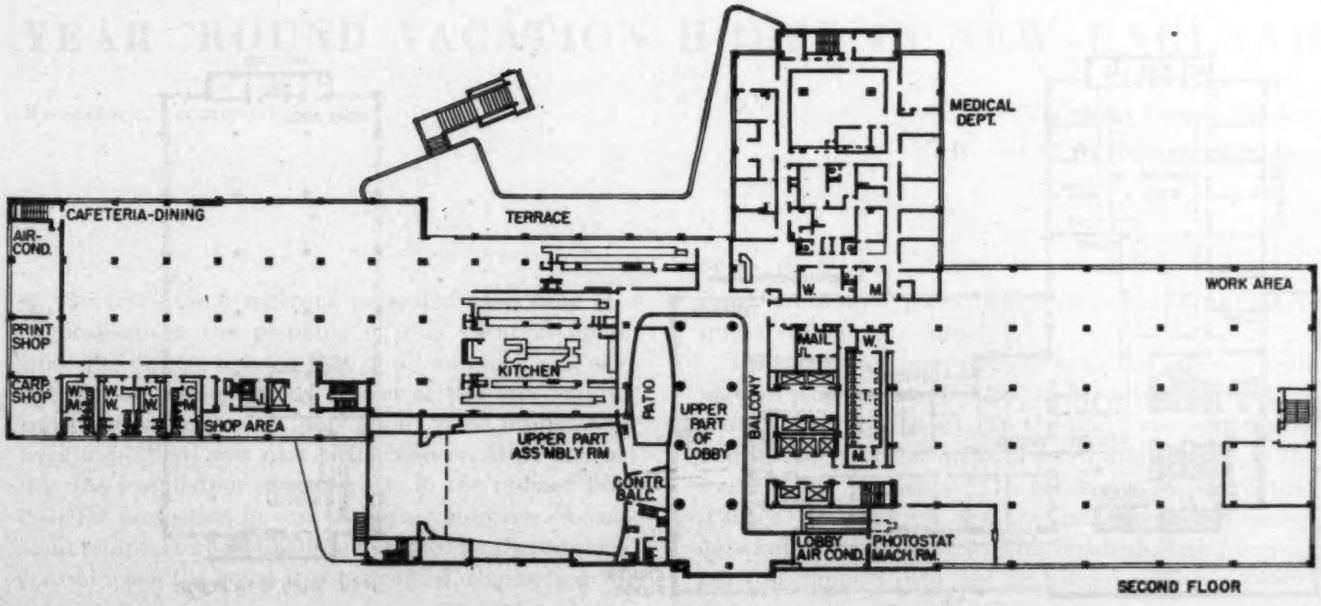
Deane's Studio

Main floor lobby runs clear through long dimensions of tower portion of building, looking out at one end to formal entrance garden, at other to employes' lounge terrace and the river. Unusual feature is a 30-ft high glass enclosed patio, planted with palms and tropical flowers, which can be enjoyed either from the lobby or from the cantilevered balcony at mezzanine



Alexandre Georges (also extreme left)

PRUDENTIAL BUILDING





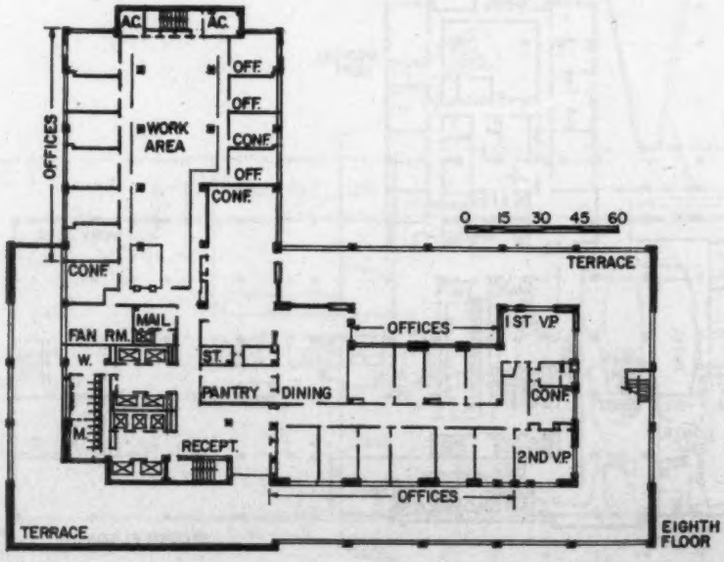


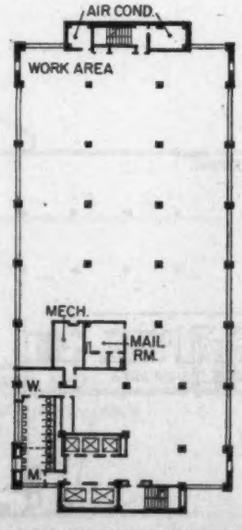


Alexandre Georges

Most Prudential space is in open office areas, though module is planned to permit partitioning without utility changes. Below, regional vice-president's office and conference room

PRUDENTIAL BUILDING





11 TH THRU 19 TH FLOOR



Joseph W. Molitor

YEAR 'ROUND VACATION HOUSE IN NEW ENGLAND

Woodstock, Vermont

Mr. and Mrs. John French, Owners
E. H. and M. K. Hunter, Architects

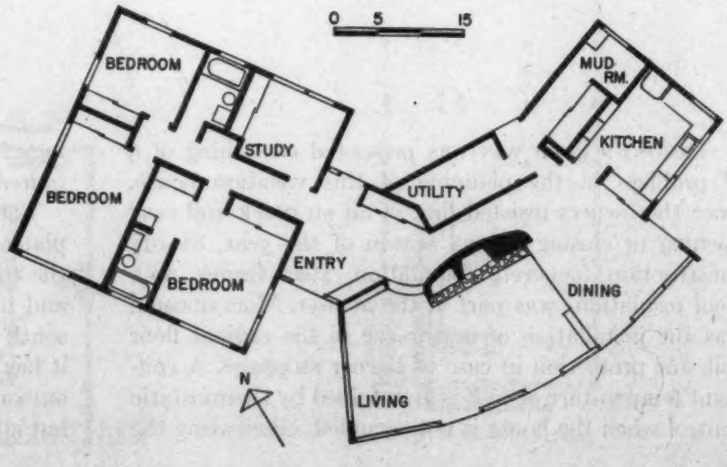
VERMONT'S COLD WINTERS presented something of a problem in the planning of this vacation house, since the owners insisted first of all on quick and easy opening or closing at any season of the year. Sturdy construction (concrete foundation, steel frame, rock wool insulation) was part of the answer. More unusual was the installation of anti-freeze in the radiant floor coils for protection in case of burner stoppage. A constant temperature of 45 F is maintained by thermostatic control when the house is not occupied, eliminating the long "warm-up" period which otherwise would be required for winter comfort.

The site is an exceptionally beautiful one — a wide plateau part way up the side of Mt. Tom, overlooking the town of Woodstock. To the north rise open slopes and heavily wooded areas of larch and spruce; to the south is Mt. Ascutney. The house was so placed that it has a 180 deg view, and the living room was curved outward toward the view. This resulted in an irregular but still compact plan (see next page).



HOUSE IN NEW ENGLAND *(continued)*









Living-dining area was curved to focus on wide view; three walls are predominantly glass, protected on south side by wide roof overhang. Kitchen and two bedrooms also are oriented toward main view. Entrance hall (photo, next page) gives direct access to every room from both sides of house and serves as buffer zone between bedrooms. Exterior is cypress siding, stained; interior walls are waxed butternut in living and entrance areas, sheetrock in bedrooms. Ceilings are acoustic tile, sash are steel. Wall between bedrooms is acoustically insulated and whole house is equipped for comfortable living throughout the year



Joseph W. Molitor









Joseph W. Molitor

HOUSE IN NEW ENGLAND

(continued)

Angled wings and central entrance hall provide maximum privacy for every part of house without loss of openness or ventilation. Living room, on slightly lower level, is open to hall only in one corner and further protected by book shelves just under ceiling height. Kitchen, at far end of living room wing, shares magnificent view to south, has pass-through to dining room. All three bedrooms have 90 deg cross ventilation, master bedroom has own bath



R. Wenkam

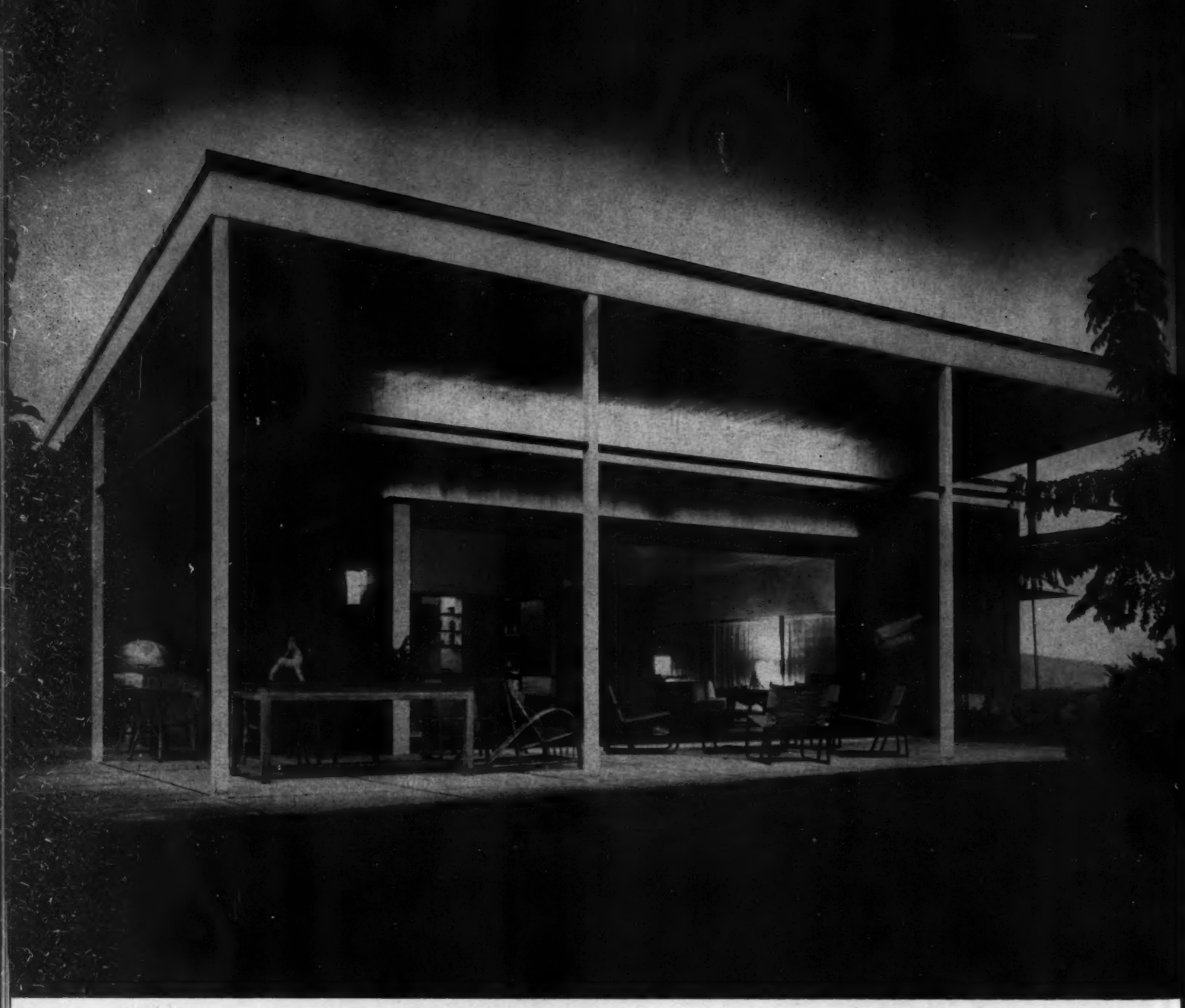
RESIDENCE ON A WINDY HILLTOP IN HAWAII

Honolulu, Hawaii

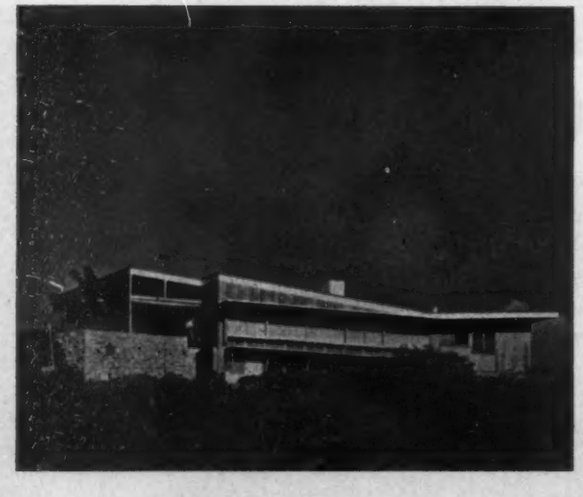
Mr. and Mrs. Vladimir Ossipoff, Owners
Vladimir Ossipoff, Architect

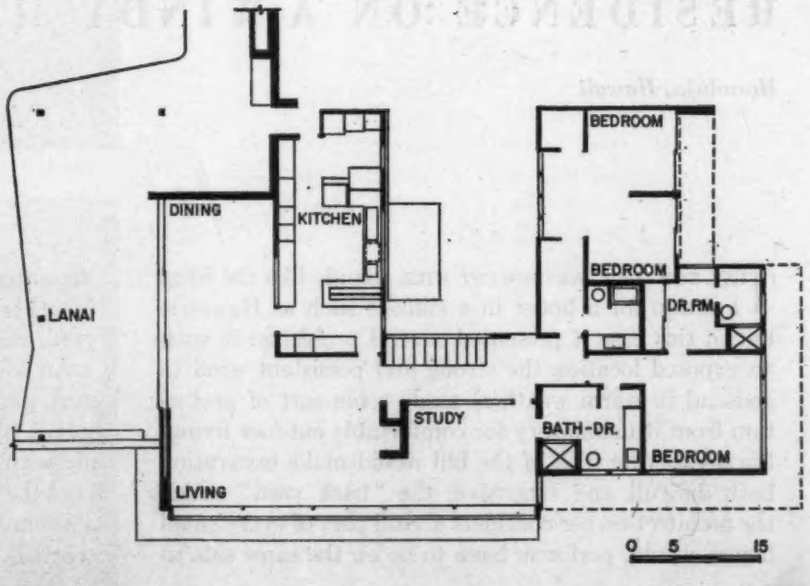
THE TOP OF A WINDSWEPT HILL sounds like the ideal location for a house in a climate such as Hawaii's, but in this case it presented several problems: in such an exposed location the strong and persistent wind (a godsend in warm weather) made some sort of protection from it mandatory for comfortable outdoor living; the underlying rock of the hill would make excavation both difficult and expensive; the "back yard" which the architect-owner considers a vital part of every small house, would, perforce, have to be on the same side as the entrance, and the kitchen, to be centrally located (another firm requirement) and adjacent to the back yard, would have to overlook the entrance.

An L-shaped lanai with one leg in the lee (see plan, next page) solved the first problem. The second was solved by perching the house at the high point and filling with soil (about 600 yards were brought in), which kept the cost of the house down to between $10 and $11 a square foot. And finally: two distinct gardens were created, one for the entrance, one for the family.



HOUSE IN HAWAII *(continued)*











R. Wenkam

Eyebrow on east side of house (far left) is flutter-proof double thickness of corrugated aluminum supported from above by light steel brackets; catwalk below plate glass windows provides for manual washing to supplement periodic spraying from built-in perforated water line at window head. Living room ceiling panels of Koa ply, a local hardwood, "were fitted with great care around the unevenness of the fireplace masonry," the architect-owner says; "there was no special detailing except for an almost complete absence of door and window trim and cornice." Bar-pantry serves living-dining areas, kitchen outdoor grill *(see next page)*









R. Wenkam

HOUSE IN HAWAII

(continued)

Entrance to house is through trellised garden between children's wing and kitchen. "I recognize the questionable advisability of having the kitchen overlook the entrance garden," the architect-owner comments, "but it is there nevertheless to be as centrally located as possible." Outdoor grill is on short leg of L-shaped lanai, in lee of house for protection from wind. On credit side, wind is persistent enough to provide adequate ventilation through jalousies under fixed plate glass extending entire length of east wall of living room and den. Children's bedrooms can be opened into one large play area or separated by tracked partitions (below).



BUILDING TYPES STUDY NUMBER

226

LABORATORIES FOR INDUSTRY

WHAT ARE THE PROSPECTS?

By George Cline Smith, Assistant Vice President and Economist, F. W. Dodge Corporation

IN ITS NEW EDITION of *America's Needs and Resources*, the Twentieth Century Fund calls technology "*the primary resource.*" Research and development are the father and mother of technology.

The age of research has sneaked up on us so fast that practically no research has been done on research itself. Little is known of the extent of research as a whole; there are practically no statistics on the number of persons engaged, or the amount of money being spent. In fact, the term is only hazily defined.

In one of its recent reports, the Second Hoover Commission calculates that during the current year, government agencies are spending some $2,400,000,000 on research. The Commission hazards the guess that about $2,100,000,000 more is being spent by industry and nonprofit private organizations, for a grand total of about $4.5 billion.

While these figures may be subject to a margin of error, one thing is certain: outlays for research and development have been skyrocketing for several years.

This is clearly indicated by the Dodge Reports totals of contract awards for new construction of laboratory and science buildings. These figures which are among the few verified statistics relating to research, show annual outlays for new buildings in the past few years running seven or eight times as high as they did in the years just before World War II.

The peak year for laboratory construction was 1952, according to these Dodge figures, which cover the 37 eastern states. With an adjustment for the eleven western states added, the national total in 1952 is estimated at about $175,000,000. While 1953 and 1954 were at somewhat lower levels, a decided pick-up in the first half of 1955 indicates that this year may well be close to the 1952 record.

Because we are in another era of expansion, and because of growing recognition that we must do far more research — particularly of the basic variety — than now, it seems clear that the trend of laboratory building will be sharply upward during the next few years.

AND THE ARCHITECTS' PART?

By James S. Hornbeck, A.I.A., Senior Associate Editor

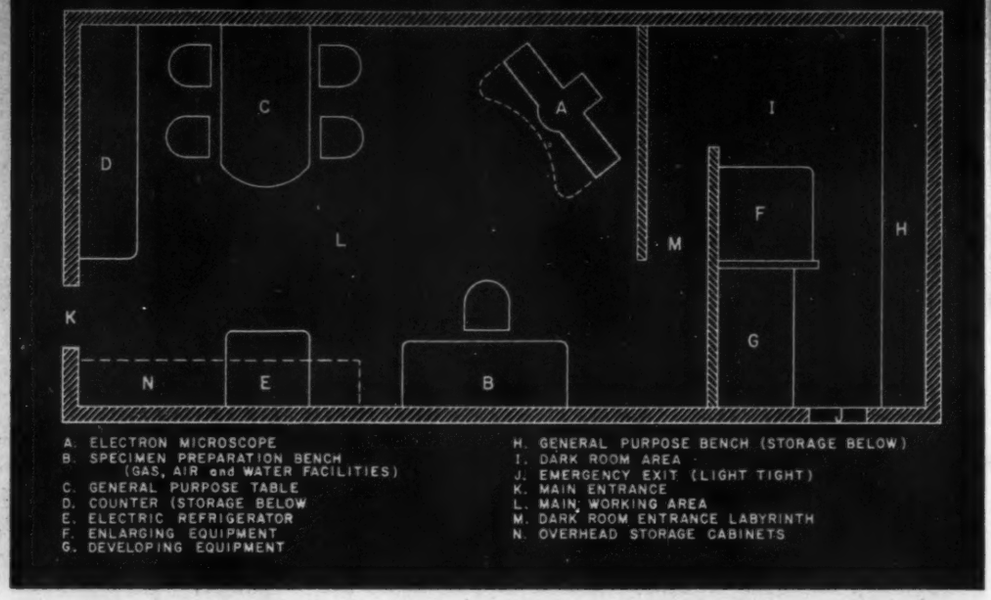
LABORATORY BUILDINGS — only in recent times architect designed — are more efficient, flexible and better looking than formerly. The unique quality an architect brings to a laboratory project is good design — good design in the broad sense. No technician is by training and experience as skilled in this specialty.

To the laboratory owner, this quality may appear intangible during the planning process, but quickly becomes the project's most tangible aspect after the job is done — when people can see and use the building. Design's value is real — so real it spurred a citizens' group to present a token of appreciation to the owner and architect of the attractive GE laboratory in their neighborhood, p. 206; of such value that a Johns-Manville executive tells how their research center design has built high morale and low technical personnel turnover, as well as favorable customer and community reaction, p. 224. These things are worth money and are good for the spirit. There are countless examples.

Architects explain to owners that competent laboratory design in the broad sense means much more than mere good looks. The specific needs must be searched out, analyzed, programmed. This task, which architects regularly undertake to start any job — often with expert technical advice — is discussed by such a consultant, p. 202. These requirements — now transformed into design elements — are then fitted together or pulled apart or piled up into an arrangement that works with grace and efficiency; fits easily into the setting. The materials and equipment selected must be attractive and easy to care for; the specialized knowledge of numerous technical consultants must be utilized and coordinated with intelligent understanding; the architect's specifications and supervision must result in good workmanship; the entire undertaking must meet the budget and be administered and coordinated by one who can get along with human beings and who can act as a fair judge when the occasional inevitable disputes arise.

Increasingly, architects are measuring up to such a performance, either with competence or brilliance. This augurs well for those who will be building laboratories and availing themselves of architectural service.





A. ELECTRON MICROSCOPE
B. SPECIMEN PREPARATION BENCH (GAS, AIR and WATER FACILITIES)
C. GENERAL PURPOSE TABLE
D. COUNTER (STORAGE BELOW
E. ELECTRIC REFRIGERATOR
F. ENLARGING EQUIPMENT
G. DEVELOPING EQUIPMENT
H. GENERAL PURPOSE BENCH (STORAGE BELOW)
I. DARK ROOM AREA
J. EMERGENCY EXIT (LIGHT TIGHT)
K. MAIN ENTRANCE
L. MAIN WORKING AREA
M. DARK ROOM ENTRANCE LABYRINTH
N. OVERHEAD STORAGE CABINETS

Plan and photo courtesy of RCA

LABORATORIES FOR INDUSTRY

PURPOSES, OBJECTIVES, PRINCIPLES, COMMON

*By Edwin Frederic Pike, Ph.D.**

INDUSTRIAL LABORATORIES are today a fad and a necessity, as power steering — everybody wants the newest kind. This desire often is the sole contribution the client brings to the architect about to design one of the most complex of buildings, yet the productive laboratory must fulfill a specific set of purposes and objectives. It must meet today's needs and anticipate tomorrow's. There can be no standard model.

THE PROGRAM. Determining precisely what is required is one of the difficult problems. A typical scene unfolds at the initial meeting. The architect's question, "What do you want this lab to do?" evokes strange answers. The technicians ask for labs and equipment without end; the "top brass" want a monument to their administration; the sales and public relations department request a country club for customer entertainment; the treasurer demands a building that will pay for itself in five years and cost $9 per sq ft to build. If all these were incorporated, you would have a building with the "beauty and utility of a medieval castle, a battleship, and a greenhouse — all in one."

Another provoking situation arises when someone says, "We want a building like X's" when X makes baby food and your client extracts rare metals from ores. One hardly expects a screwdriver to jackplane a board, and the initial problem becomes one of deciding exactly what the building must do, and how. Experience suggests a procedure and some principles that are often helpful in tying down the problem.

Call a meeting and invite the production heads, a couple of men from sales, an advertising man, the entire technical staff, and any other persons expected to use the laboratory in any way. Ask each of these people for written answers to a few simple questions and give them a week to turn in their papers. Ask:

A. What would *you* like a laboratory for your company to do? Describe its purposes and functions from *your* viewpoint and interests.

B. In *your* opinion what would it take in terms of facilities, people, equipment, apparatus, etc. to accomplish these?

C. Looking to the future (as well as the present) what would *you* like to see included in the new laboratory?

It is often a pleasant surprise to learn how seriously and constructively most persons will answer, for here is the opportunity to influence the design of a facility they have needed and wanted and will use for a long time. Frequently an "angle" is uncovered that the director of research had missed entirely; or a new way to accomplish something important to the company is suggested. Technically trained people usually have definite and often creative ideas.

After the architect and client have reviewed the answers (and followed up some of them with further discussion) the purposes and objectives can be listed. If the executive judgment of the company is then superimposed on the list — since plans or facts not generally known to others may exist — a still better list can be made. The purposes and objectives can be rated in the order of their importance to the company.

Now the architect can (if necessary) guide the client in classifying the laboratory. This may be in accordance with (A) the principal science, as chemistry, physics, pathology, engineering, etc., or (B) the activity, as

* *Dr. Pike, Director of Chemical Engineering for Giffels & Vallet, Inc., L. Rossetti, engineers and architects, has had wide experience in organizing and directing research for several industrial corporations.*



U. S. Forest Service, Forest Products Laboratory Photo

At far left is shown an electron microscope, and at next right, a typical plan and fixture layout for a laboratory devoted to electronic microscopy. Photo at right shows the interior of the newest controlled humidity room at the Forest Products Laboratory in Madison, for testing wood under controlled conditions of temperature and humidity

DENOMINATORS

When The Client-Owner Says, "I Want a Laboratory"

fundamental research, applied research, development, control, etc., or (C) the field of investigation, as fuels, paints, high polymers, solvents, etc.

The laboratory may ultimately be a mixture of these kinds or a simple example of one, depending upon the size, research experience, plant distribution, and special requirements of the company. However, it is important at the outset that a classification be made.

Ideas schemes, and details for incorporating special requirements into the scheme are derived from the technical personnel, from equipment manufacturers, from other installations, or best of all from the designers ingenuity. Special needs are usually many, and may include areas, rooms, or whole wings devoted to high pressures, microanalysis, chromatography, etc. There may be a few dormitories for technical personnel — not at all an unusual need today.

There is a large background of work from which an architect may draw, but a still larger future to which he may contribute; this is the challenge. Research requires imagination — and nothing less than imagination can produce an outstanding laboratory design.

The electron microscope is dependent upon its environment for proper functioning. The two illustrations above show the machine itself and a recommended layout. The area must be free of vibration — preferably by means of structural independence — and the machine kept out of electrostatic or magnetic fields which might be created by motors, generators, or other electrical equipment. Two supplies of cleansed and cooled water are required, as is air conditioning to draw off the heat generated by the machine and to eliminate dust and dirt particles. Darkening the room is also necessary.

A constant humidity or constant temperature room is often required for research in order to reproduce experimental procedures or test materials under similar conditions. This is especially true in the pulp, paper, paint, and wood industries. Such a room is in operation at the Forest Products Laboratory in Madison, which is shown above. This room is 20 by 20 by 12 ft. Outside air must be dehumidified and reconditioned by means of steam coils and water spray nozzles. Temperature can here be maintained at from 40 to 100 degrees F. and relative humidities from 20 to 85 percent.

COMMON DENOMINATORS. Facilities common to laboratories of all kinds are listed below. Many are already familiar; so we discuss further those not regularly encountered in architectural practice.

- Offices
- Reception
- Conference rooms
- Auditorium
- Food facilities
- Shipping, receiving
- Microscopy
- Constant temperature room
- Constant humidity rooms
- Chromatography
- Glass washing
- Storage:
  - equipment
  - glassware
  - supplies
  - samples
  - files
  - exterior
- Computer room
- Spectroscopy
- Photography
- Water distillation
- Balance room
- Protective devices:
  - fire, chemicals, explosion
- Distribution systems:
  - water
  - fuel gas
  - vacuum
  - compressed air
  - electricity
  - steam
  - various gases
  - various liquids
- Waste disposal systems
- Animal quarters
- Refrigeration
- Communication
- Engineering, drafting
- Shops:
  - apparatus making
  - apparatus repair
  - models, glass
  - carpenter shop
- Library
- First aid
- Maintenance, janitor facilities
- Rest rooms, toilets, lockers, etc.





Photos courtesy of Monsanto Chemical Co.

At left are shown two views of the 40 by 60 ft computer room of the Monsanto Chemical Co. in St. Louis, containing equipment installed by IBM. Next right, a view of the spectrophotometric laboratory, American Cyanamid Co. laboratory, Bound Brook, N. J. At far right, an animal treatment room at the Hoffman-LaRoche pharmaceutical laboratory located in Nutley, N. J.

Chromatography is a technique used to separate mixtures of compounds and is especially helpful in the study of complex organic substances, the identification of compounds, and in concentrating materials contaminated by large amounts of foreign substances, as well as in analysis. The recent use of scaled up chromatographic techniques has posed construction problems for proper installation of equipment. Headroom, supports and drainage for equipment must be correctly designed. Most difficult to deal with is static electricity, for its charges must be drawn off and grounded.

Increasing civilian use of **radioactive materials** may require special washrooms, locker-rooms, and processing stations, much like those in our atomic energy installations. Removal of clothing and its safe disposal may be required upon leaving "hot" areas; also equipment for reading and recording amount of exposure. In some cases decontamination will be necessary, and various kinds of detergents, abrasives, soap, and protective creams must be available. Shielded lockers may be required for clothing, as well as provision for transporting contaminated articles to disposal or laundry. The degree of attention to such measures will depend, of course, upon the activity present. Laboratories using such materials for analytical, biological and similar processes use relatively small amounts of radioactivity.

To indicate the special attention to details necessary in laboratory areas using radioactive materials, consider two of prime importance: hoods and table tops. A positive and constant air flow must ventilate hoods and recirculation is generally prohibited. Also, filters are usually provided. For table tops, modern thinking prefers a strippable surface which can be replaced at regular intervals, or removed when an accident occurs. A lip or curb prevents spillage of material.

Not many years ago, laboratory technicians washed their own glassware when the sink became full. Today, such a procedure is expensive and in many cases inadequate since regular procedure calls for a common **glass-washing room,** with regular personnel, for all apparatus in the building. In cases where hazardous biological or bacteriological materials are used, or toxic or radioactive materials are involved, special equipment, materials, and techniques are employed in order that the glassware be sterile for the next user. Mechanical washing equipment is often installed.

Storage is an important factor in over-all efficiency. Haphazard location results in lost time for highly paid laboratory personnel seeking material or equipment. The lessons learned by mail order houses in "picking orders" might well be applied in planning storage for accessibility. Storage should provide proper protection, arrangements for inventory control, and necessary systems for fire protection.

Some laboratories serve as a distribution point for samples. In this event, there should be complete facilities for cataloging, weighing, packaging, shipping.

In some cases exterior storage will be required for solvents, hazardous or toxic chemicals, etc. If the volume of use requires extensive interior use of these items, they may be distributed by piping or conveyor belts, sometimes located in a tunnel. Building codes may require that such a tunnel be ventilated, lighted, and equipped with fire and explosion controls.

Micro techniques are being increasingly used today, as opposed to the older practice of working with relatively larger quantities of material. Often only a drop of a given substance is prepared and minute quantities are the subject for work. As a result, special arrangements are required even for a simple weighing operation. The microanalytical balance must usually rest on a series of shock absorbing layers between thick lead plates, on a pedestal supported separately from the building's structure and penetrating to bedrock.

Computers, or electronic "brains" can today be used not only to solve mathematical problems, but also in carrying out certain kinds of experiments. Data representing variables and their changes are fed into



Research Division, American Cyanamid Co



J. Alex Langley

such a machine rather than setting up a whole series of actual experiments to study the effect of changes upon a reaction or process. See illustrations above.

Accurate control of temperature and humidity within small ranges is necessary for reliable functioning of the machines. Relative humidity must be maintained at 40 to 60 percent at 80 degrees, even when the machine is at rest. The air in the computer room must be as dust-free as possible, and lighting should be balanced against the computer's panel and signal lights.

Spectrophotometry, X-ray, and photography are being increasingly used in modern research for identification, purity determination, and analysis of various materials. All of these require the preparation of negatives, prints, and reproductions of various kinds. A typical layout for such an area would house X-ray diffraction apparatus, an electron microscope, a negative dark room, a photographic print room and some laboratory space. Vibration can often be more easily controlled if such a section is located in a basement area. It should also be air-conditioned for dust and temperature control, have light seals of the sliding type, and a crash door for emergency exit from dark rooms. The picture above shows a spectrophotometry.

Water, fuel gas, electricity and steam distribution systems are a familiar consideration and pose no particular problems, but in the case of lines for nitrogen, argon, helium, ether, or various solvents and other chemicals it is frequently necessary to maintain specific temperature ranges. This means that such systems must be either heated or refrigerated and lines must be insulated and often protected by automatic fire fighting equipment as well.

Fire and explosion protection is necessary when high pressure experiments are to be conducted. Shock absorbing walls consisting either of a layer of sand between insulating board or of thin panels of soft wood are commonly used to enclose the high pressure cells. Since reactions are unpredictable, observation can be arranged through telescopic vision apparatus. Mechanical and electrical devices are used to start or stop processes, draw off samples, or add chemicals. Several types of fire quenching materials should be installed to work either in sequence or under manual control, depending upon the type of explosion anticipated. It is customary to place high pressure cells within areas built with explosion panels and non-fixed roofs. Such structures require shielded electrical fixtures and switches and pressure or temperature actuated fire fighting systems.

Animals play an important part in biological, pharmaceutical and medical research, so provision for their rearing, holding and treatment is necessary. In such quarters it is required that light, temperature and humidity be closely controlled; a high degree of cleanliness is imperative, and degrees of sterility and asceptic-ity must often be achieved. Pictured above is a typical example of a well constructed animal treatment room. For animal surgery, the same requirements must be met as in a regular hospital operating room.

The psychological effect of the surroundings upon the employees is of great importance. The product of a laboratory is ideas, and the environment should be pleasing and free from distraction if maximum productivity and high morale is to be achieved. The building must be accessible to others in the company — but not too accessible to those who do not regularly work there. It must provide good communication on the one hand and make possible nearly monastic seclusion on the other. The tasks are such that regular hours cannot always be observed and long periods of concentrated effort are sometimes required, so the environment then becomes doubly important in sustaining the workers' spirit. Pleasant spaces well ordered, attractive colors, good lighting, air conditioning, convenience, good food and a place to relax at lunch time, a quiet setting nicely landscaped — these are only some of the amenities an architect is best equipped to provide. They are of great value to the company-owner and well worth their cost.



WEST COAST MICROWAVE LABORATORY FOR

THIS HANDSOME laboratory was so well received by neighboring residents that their Community Association presented the owner with a resolution of congratulation. Completion of the landscaping plan — now under way — should further enhance the over-all attractiveness. There will be two "outdoor conference rooms" available to workers at lunch time for lounges; also a patio.

The location, in Stanford Industrial Park, enables employees to study part time for advanced degrees and provides also the mutual advantage of informal cooperation and pooling of skills with the university staff.

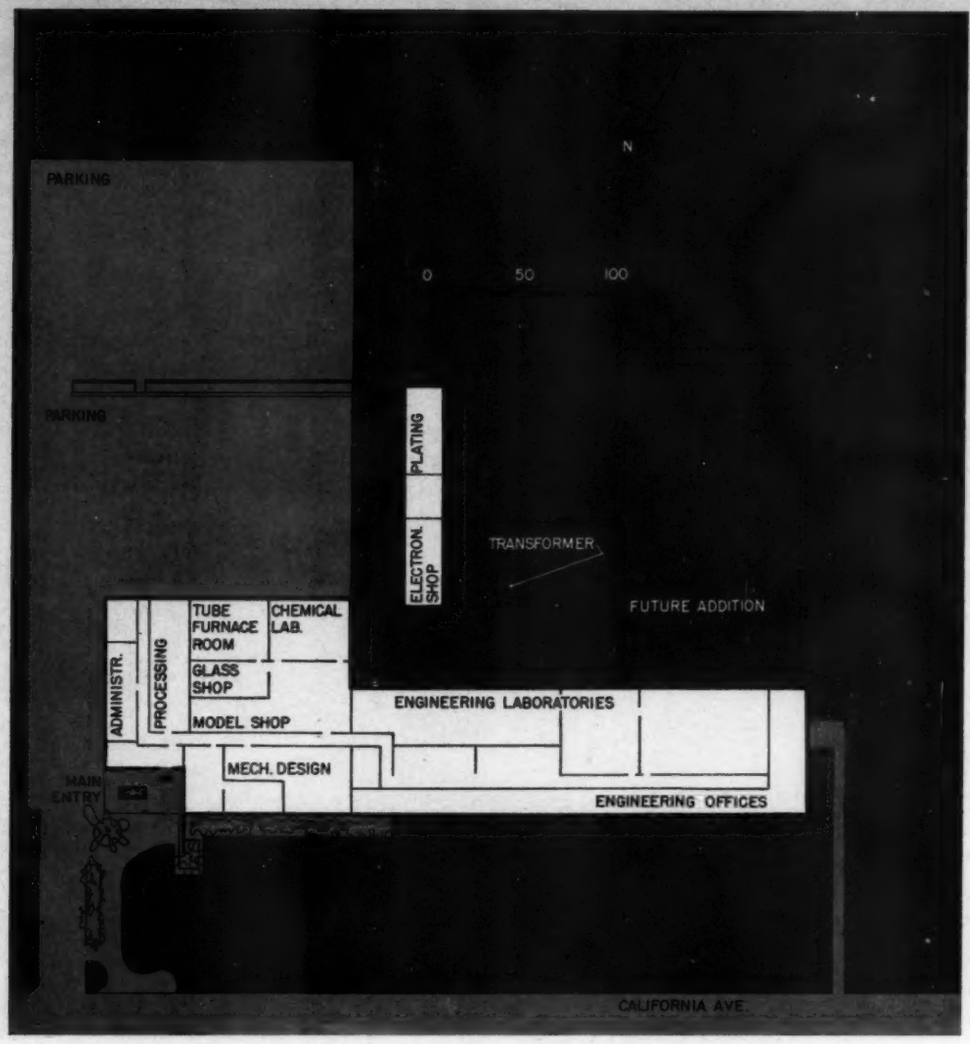
The scheme is a three part one, with part two now under construction. The diagrammatic plan as shown will change as the building grows, so that offices toward the street in the present block, now used by scientists, will become administrative quarters.

The exterior wall panels are of concrete, poured on the ground and tilted-up into place to fill the voids in the steel frame, which is arranged on a bay pattern 18 ft on centers both ways. The 21,000 sq ft structure was quickly and economically built, the owner moving into the first unit only 4 months and 8 days after the first meeting with the architect.

Exterior concrete was painted; sash are steel, painted; floors are asphalt tile on slab; interior walls are birch or fir plywood on studs; ceilings are of exposed concrete slab, painted; interior doors are of wood, flush type.



Rondal Partridge

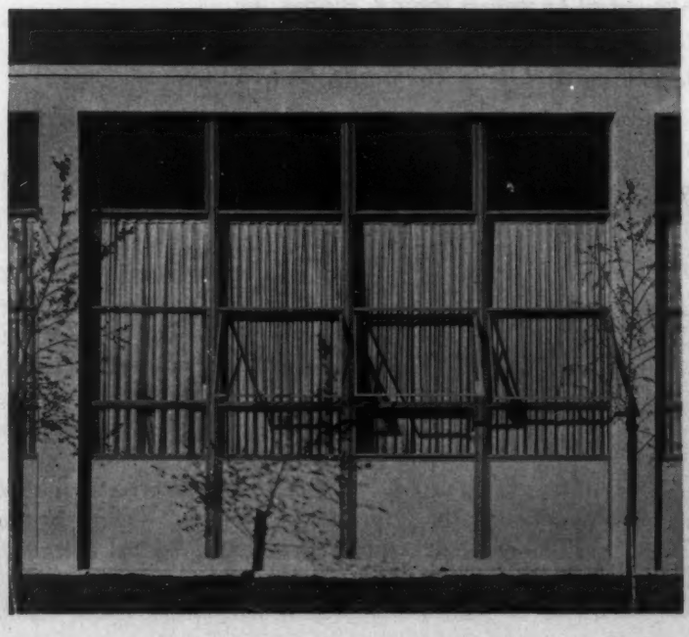


GENERAL ELECTRIC

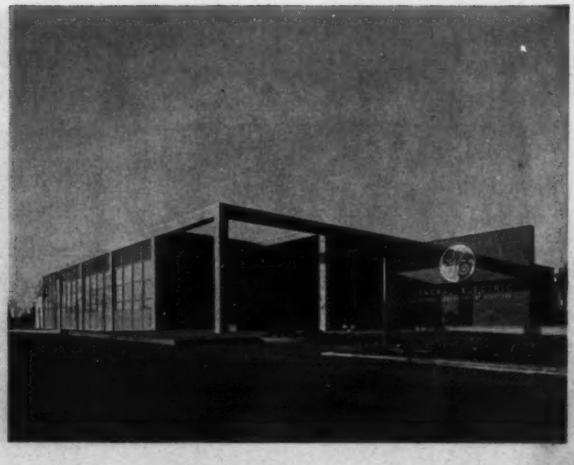
Location: Palo Alto, Calif.
Architect: John Carl Warnecke
Structural Engineer: John A. Blume
Consulting Engineers: Coddington Co.
Landscape Architect: Thomas D. Church

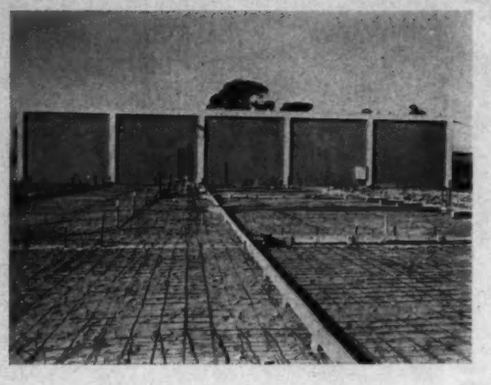


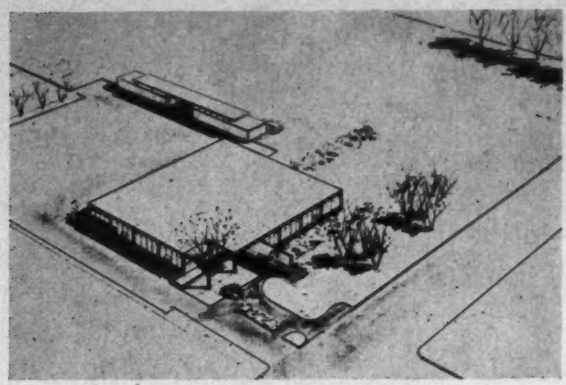
GE AT STANFORD

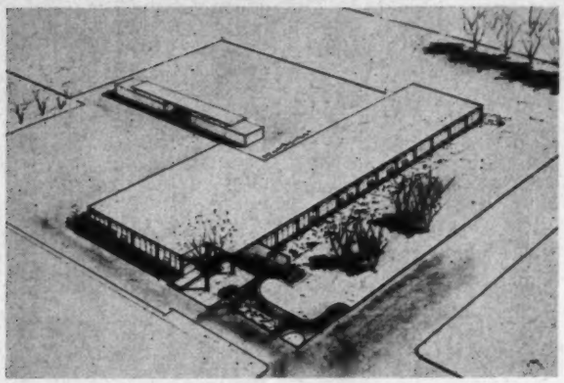


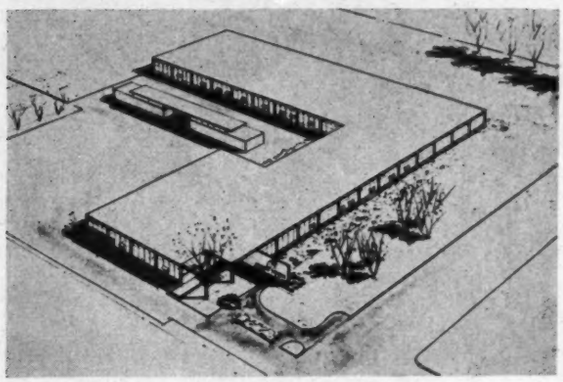
Rondal Partridge







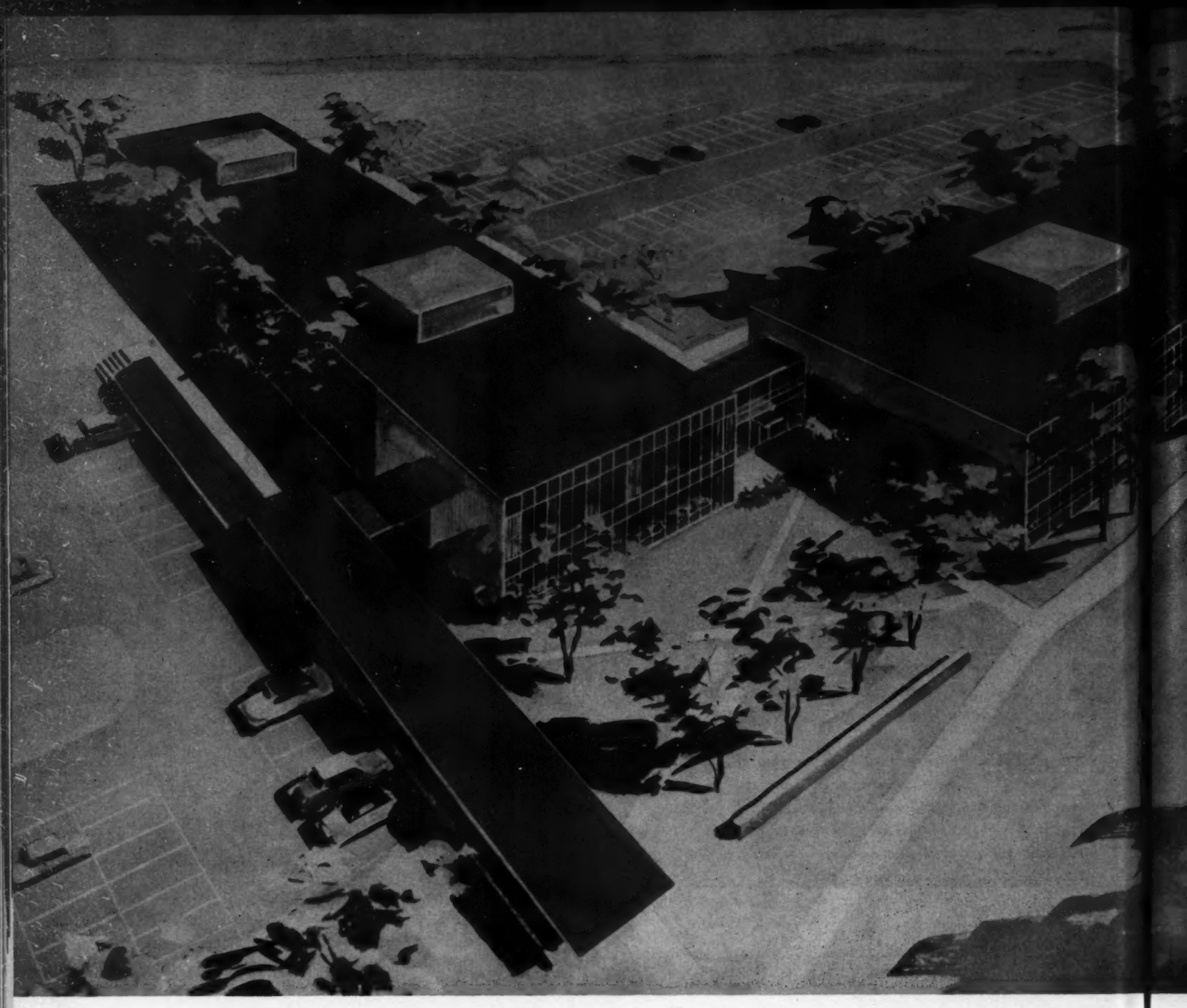




A typical laboratory interior is shown at left, as is a detail of the modular sash arrangement and its application

The photo above pictures actual construction of part two of the three-part scheme, in which the concrete wall panels will simply be lifted out and reused. At right are the architect's sketches to show the three phases of development and, below, a rendering of the completed building



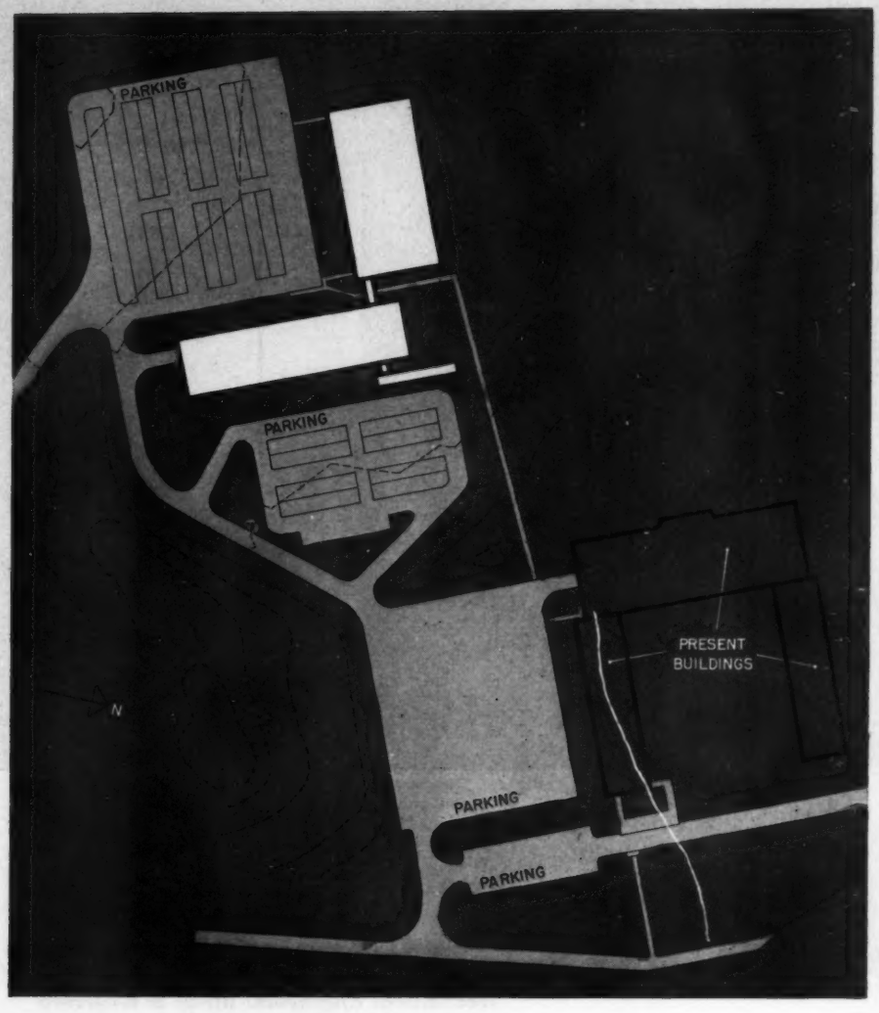


IBM ENGINEERING & DEVELOPMENT LABORATORY

ADJACENT TO the company's existing research group and in a wooded valley two miles from the factory, these two interconnected buildings for engineering and development — now under construction — will contain 96,000 sq ft and house approximately 500 of the engineering staff. Those in the new buildings will use the auditorium, cafeteria, and library of the nearby research laboratories, only recently dedicated.

Architect Noyes says, "The basic concept of these buildings is that they are to provide large space totally undivided at the beginning, but so organized that it can readily be subdivided into an assortment of useful sizes for various purposes. The partitions will not extend to the ceilings. All service lines will run above an acoustical ceiling of modular pattern so that panels may be removed as required to provide for a given space. There will be no services in the floor. The vertical ribbed walls will be of extruded aluminum and the exterior wall panels in two shades of gray. The buildings will be completed late in 1955."





IN THE NORTHEAST

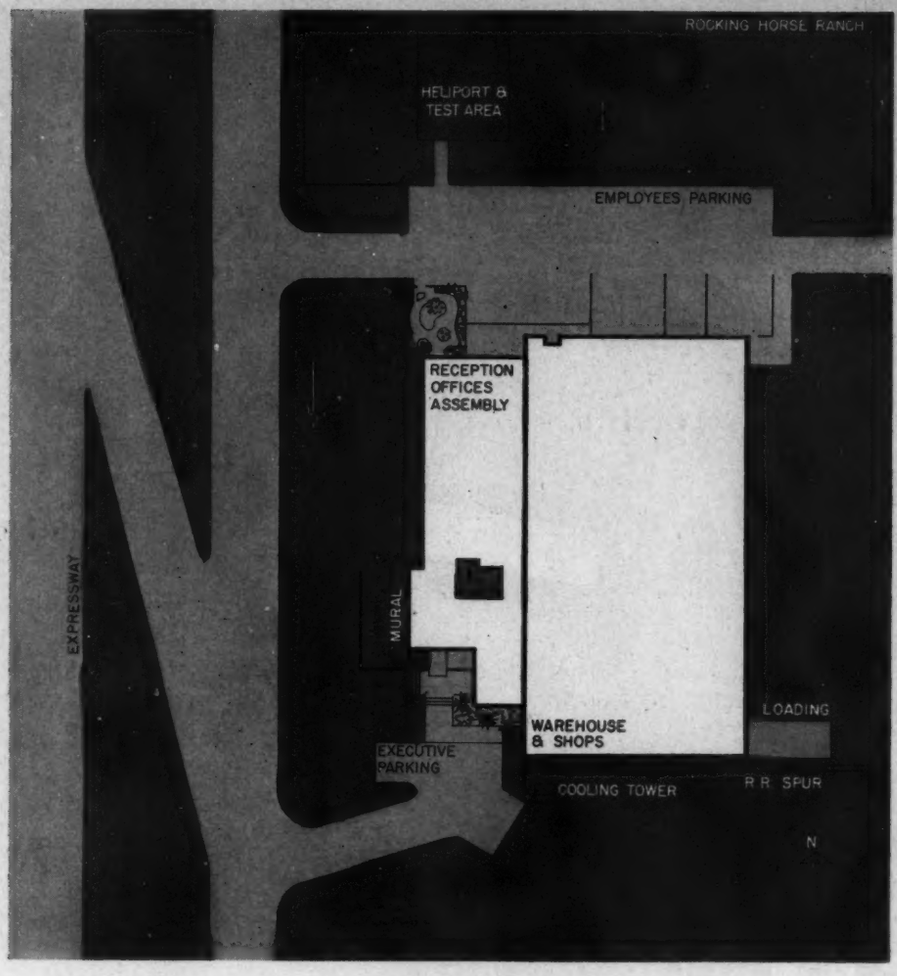
Location:
Poughkeepsie, N. Y.

Architect:
Eliot Noyes and Associates

Engineers:
Seelye, Stevenson, Value, and Knecht

Landscape Architect:
Dan Kiley

Associated Contractors:
Turner Construction Co., and
G. D. Campbell Building Co.





Location: Dallas, Texas
Architects: Harwood K. Smith & Joseph M. Mills
Structural Engineers: Mullen & Powell
Mechanical Engineers: Blum & Guerrero
Landscape Architect: Alex Bul
Contractor: Burgher Construction Co.

FARM EQUIPMENT



Ulric Meisel



TESTING AND SALES CENTER IN THE SOUTHWEST

THIS BUILDING, owned by the Stewart Company, is located near Dallas and at one corner of Rocking Horse Ranch — an area developed by the company and devoted to research, experimentation and demonstration of farm equipment. The ranch boasts a heliport — the first in Dallas; and the company uses a helicopter for trouble shooting and personnel transportation. The building serves as a center of operation for research and as the company's home office and warehouse. Their former location was in an industrial section where expansion was impossible. Their recent rapid growth is a manifestation of the general increase in farm equipment sales accompanying the feeling that the recent drought has ended.

The building contains 10,000 sq ft of office and display space and 28,000 sq ft of warehouse area; cost $236,000 to build. The diagrammatic plan shows the general disposition of the elements in relation to the site. There is a reception and public display area, a small auditorium with adjacent projection booth, executive offices opening to an interior patio which is skylighted and landscaped, general offices, employes' dining room and dining terrace, a mail center, and a large warehouse and work space.

Construction: brick or stone exterior walls on a steel frame, with interior walls of brick or of fabric over gypsum board. Interior partitions are typically either vinyl plastic wall covering or fabric over gypsum board; for executive offices ash or walnut wood panels natural finish. Floors are terrazzo, vinyl tile, asphalt tile, and carpeting. Lighting is recessed into acoustic tile ceilings; entire structure is sprinklered and air conditioned.



Ulric Meisel





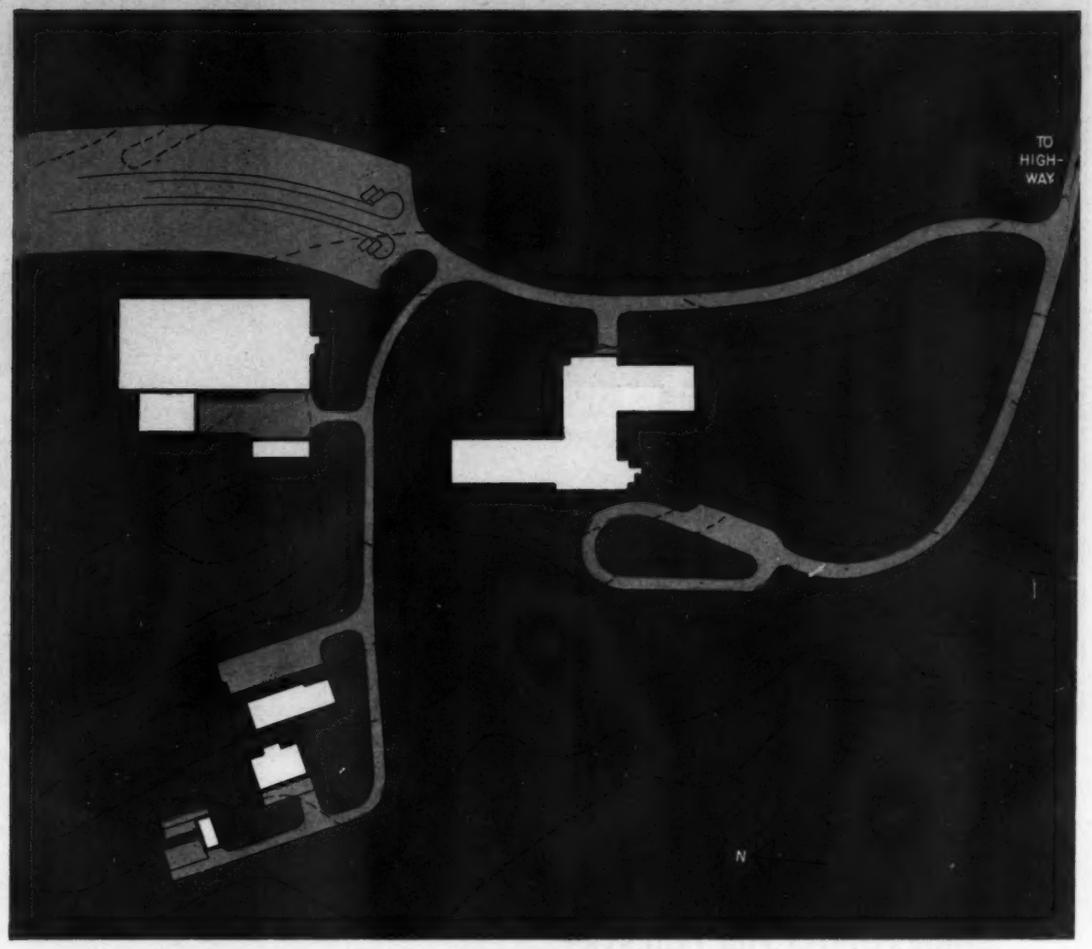


STEWART COMPANY

Above is a photo of the entrance and at right are three interiors. Reading from top to bottom they show: an executive office viewed from the patio; the employes' dining area and its garden; a work area for the testing and repair of equipment.

The 67 by 13 ft mural of glass mosaic, shown below, was designed by Miguel Covarrubias and is the principal exterior feature. Its stylized forms, in vivid colors, portray the Indian concept of the four elements — earth, water, fire, sky — in dramatizing agriculture and the forces affecting it





U. S. Rubber Co. Research Center, Wayne Twp., N. J.

THE ANALYSIS OF SEVERAL LABORATORY PLOT PLANS

As designed by Shreve, Lamb & Harmon Associates

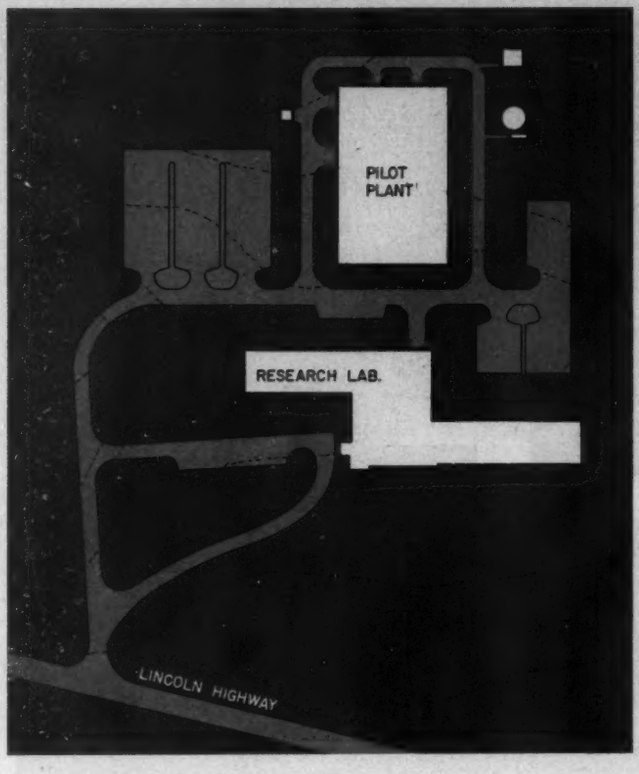
by Harold C. Bernhard, A.I.A.*

THE RECENT TREND that locates laboratories away from the industrial plant atmosphere has made the selection of a suitable site a matter of major importance. In order to provide ideal working conditions for research scientists, to attract younger engineers and technicians to the company, and to stimulate the creative thinking that leads to new product development, a favorable situation is necessary. The site should be physically attractive and remain so when buildings, roads, parking, and possible recreation areas are constructed. Practical matters such as room for future growth, proximity to public transportation for those not driving, and availability of utilities — water, gas, electricity, sewer — must of course be taken into account.

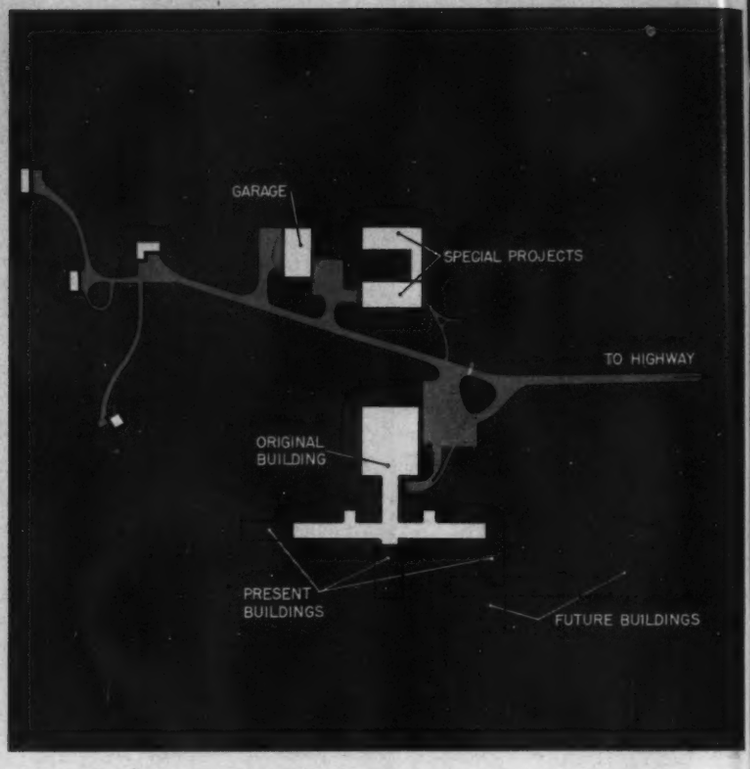
After a site is selected, many factors in addition to the owner's research program must be dealt with, and the problem becomes increasingly complex as it develops. Basically, however, the plan should always consider the unknown needs of the future as well as satisfying those of the present.

When laboratories are planned for rural or suburban residential areas the zoning laws in these sections must be met or variations obtained by appeal. Usually, little

* *Mr. Bernhard is a senior partner in the New York architectural firm of Shreve, Lamb & Harmon Associates, and is in charge of much of that organization's laboratory work.*



Armstrong Cork Co., Lancaster, Pa.



RCA Laboratories, Princeton, N. J.

difficulty need be experienced if the local authorities can be shown that the particular development will actually be an asset to the neighborhood, not unlike a park or college campus in character. Other restrictions often imposed locally are concerned with building height, ground coverage, building distances from property lines, and smoke or odor nuisance; factors the competent architect commonly deals with in his stride.

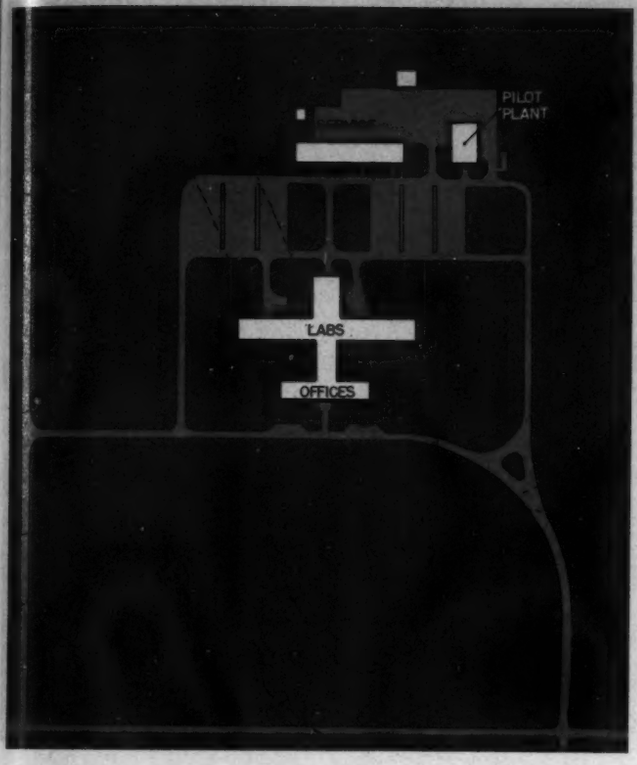
CASES IN POINT:

The United States Rubber Co. research center now under construction in Wayne Township, N. J., is an example located in a residential district. (See preceding page.) The site is hilly and densely wooded with a drop in level to the west that affords a fine view of the Packanack Lake valley and beyond. The topography influenced the informal arrangement of buildings. The asymmetric form of the main laboratory building is designed to permit future additions at the ends without destroying apparent balance. Note the complete seclusion of the buildings from the public highway. In this case the owner preferred privacy for his operations to the possible advertising value of a building prominently located on the highway. The ample plot, approximately 100 acres, allows generous space for growth. In its quite unusual sylvan setting, this center should compare favorably in character with a college campus.

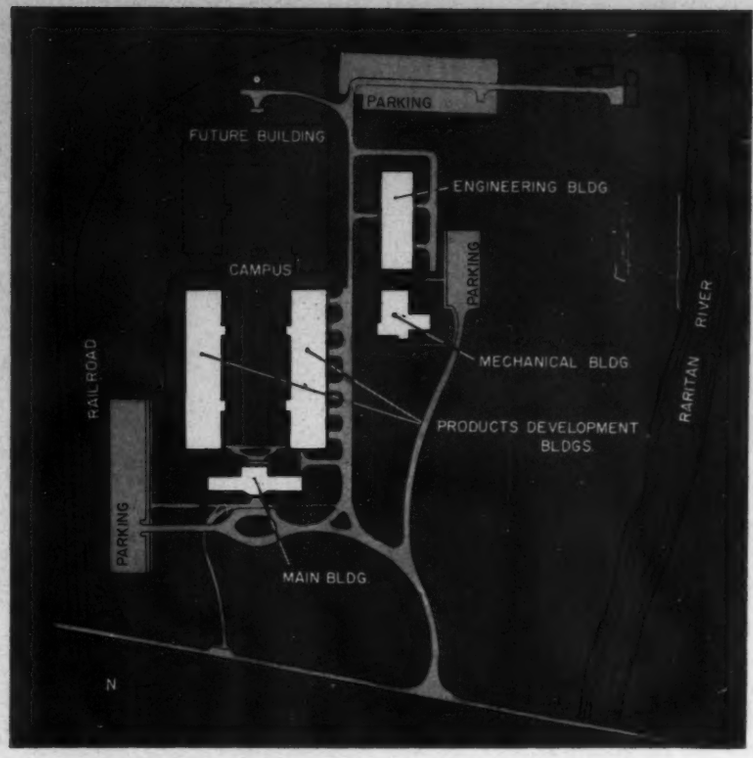
Following a different line of thought, several research centers have been located on highways or railroads. The resulting publicity to passersby informs them that the company is progressive; interested in new developments.

On the Lincoln highway near Lancaster, Pa., the placing of the building for the Armstrong Cork Co. laboratory allows only the main building to be seen from the highway, and has as a result attracted favorable notice. The service and pilot plant structures, less pretentious in appearance, are kept to the rear, removed from the sight of the passerby. (See illustration.)

The development of the plot for the RCA research laboratories at Princeton began when the architects prepared plans and models for probable expansion from the original block built at the beginning of World War II. (See illustration.) Since then, growth has generally followed the master plan. In addition to the main connected group, several separate structures have been built to house research work for special governmental assignments, and the plot is large enough to accommo-



Stanolind Gas & Oil Co., Tulsa, Okla.



Johns-Manville, Manville, N. J.

Plot Plans by Shreve, Lamb & Harmon Associates

date these buildings comfortably. For accessibility, it was deemed advantageous to group all laboratory facilities under one cover, except for the special projects. The director of research and other officials who must contact all laboratory functions thus need not leave the shelter of the one structure in bad weather. Since the research program involves electronics, the scheme is practical. If a chemical or other hazardous operation were involved, a less concentrated arrangement would be preferable. As it is, fire walls and doors for the additions and wings minimize possible fire hazards.

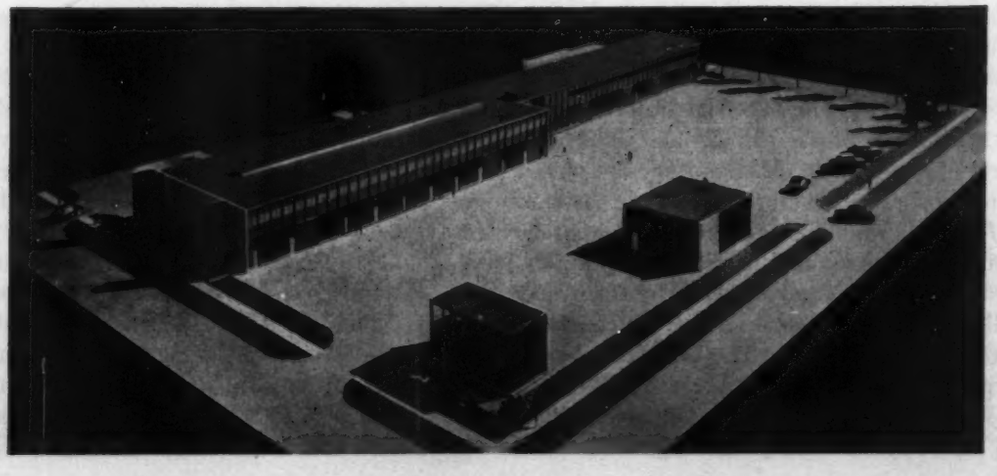
At Stanolind Oil & Gas Co. in Tulsa, the plot arrangement is such that the main bench laboratories are housed in one three-story block, 410 ft long. The extensive office areas typical of an oil laboratory are placed in a contiguous T-shaped structure in front of the laboratory block. Thus, plan modules and story heights for office and laboratory units could be planned separately with the specific requirement governing. The office module is 9 ft with window mullions 4 ft 6 in. on centers; while the laboratory module is 11 ft. (See illustration.) The concentration in one block of the necessary mechanical and electrical connections for the laboratory effected a decided economy. Accessory buildings for service and pilot plant operations are grouped to the rear of the main building, separated from it by a parking lot.

The quadrangle arrangement of the main buildings at the Johns-Manville Research Center, Manville, N. J., was designed before any construction began. The symmetrical plan was not an arbitrary one, but developed naturally from the owner's program. It consists of a central unit for fundamental research, administration, library, cafeteria, and other facilities commonly used by all. This building is linked by enclosed passages to two product development or semi-works buildings which are served by their own office blocks. (See illustration and also p. 223.) Accessory buildings for the engineering department and for mechanical development work are placed outside the main quadrangle. Steam and power for this center are received directly from one of the company's manufacturing plants, which is located nearby. There is an immediate economy advantage in such a scheme, but in a more general sense, recent thinking has led to serious consideration of the idea that the esthetic and long term economic advantages of a laboratory ideally situated in its own surroundings may well outweigh the less permanent gain of the location near a factory.

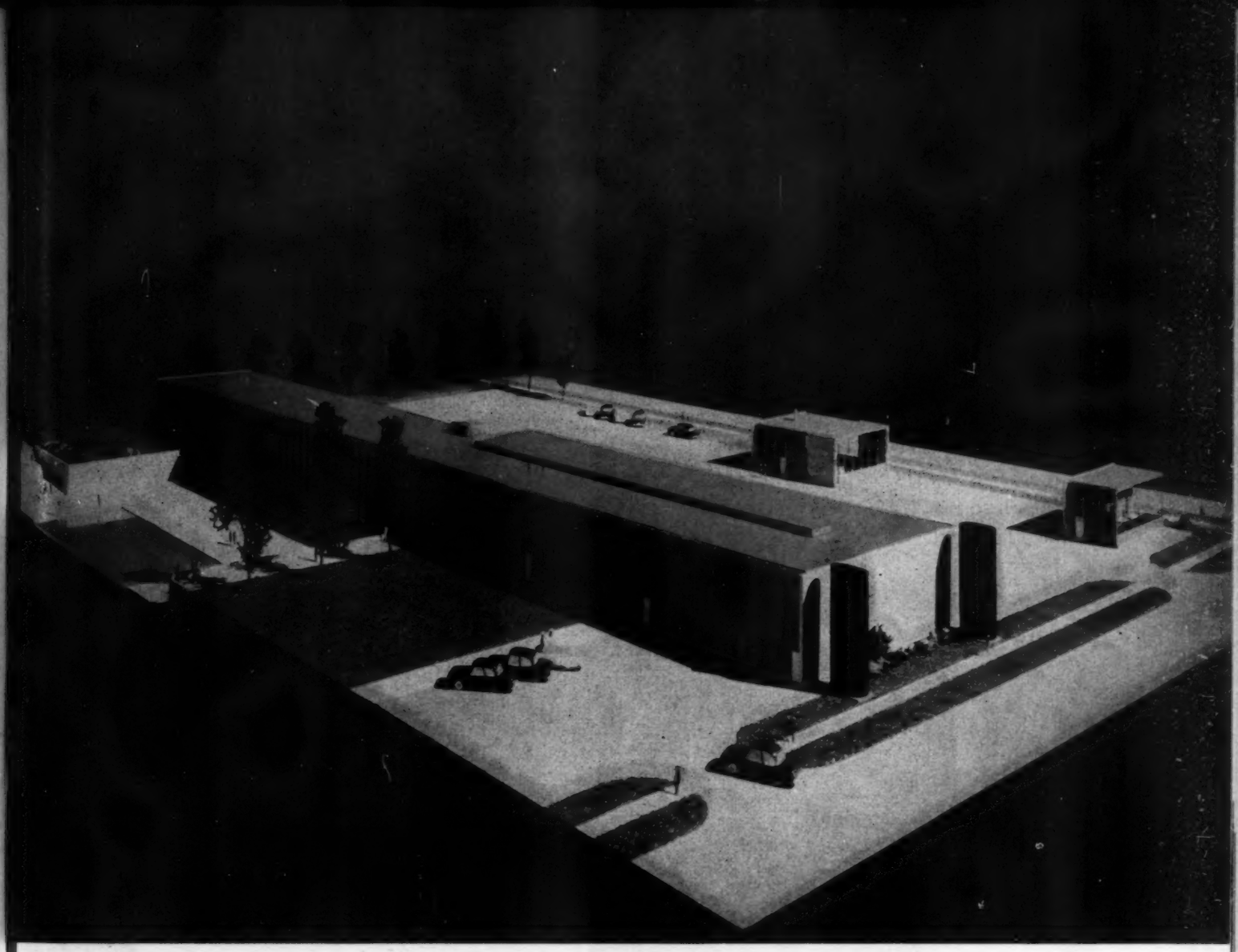


Location: University of Michigan, Ann Arbor
Architects & Engineers: Giffels & Vallet, Inc., L. Rossetti
Supervising Architect, University of Michigan: Lynn W. Fry

A BUILDING IN T



Ions-Art



THE MIDWEST FOR AUTOMOTIVE ENGINEERING STUDY

THIS PROJECT is among the first of the new buildings in the expansion of the university campus to the north of the Huron River and is near two other engineering research buildings now under construction. The group of three units and their equipment for research and testing will be financed largely by the State and in part by gifts and grants from private sources.

The three buildings will house a small heating plant, a fuel blending house and the engineering laboratory itself. The two-story laboratory will be of unusual construction and will contain specialized equipment essential to its intended use. About one half of the principal building will be occupied by dynamometer laboratories and the testing machinery required for them; the other half will contain a large shop and garage area on the first floor and small computing rooms, offices, conference rooms, equipment rooms, and an area for graduate research on the second floor.

The $1,600,000 structure will be built upon a reinforced concrete frame, will have an aluminum window wall for exterior facing, a built-up roof, floors of quarry tile in the laboratory section and of asphalt tile in the office section, with interior partitions of cinder block. Plumbing will be of conventional type and ventilation both natural and mechanical. Lighting will be a combination of fluorescent and incandescent.



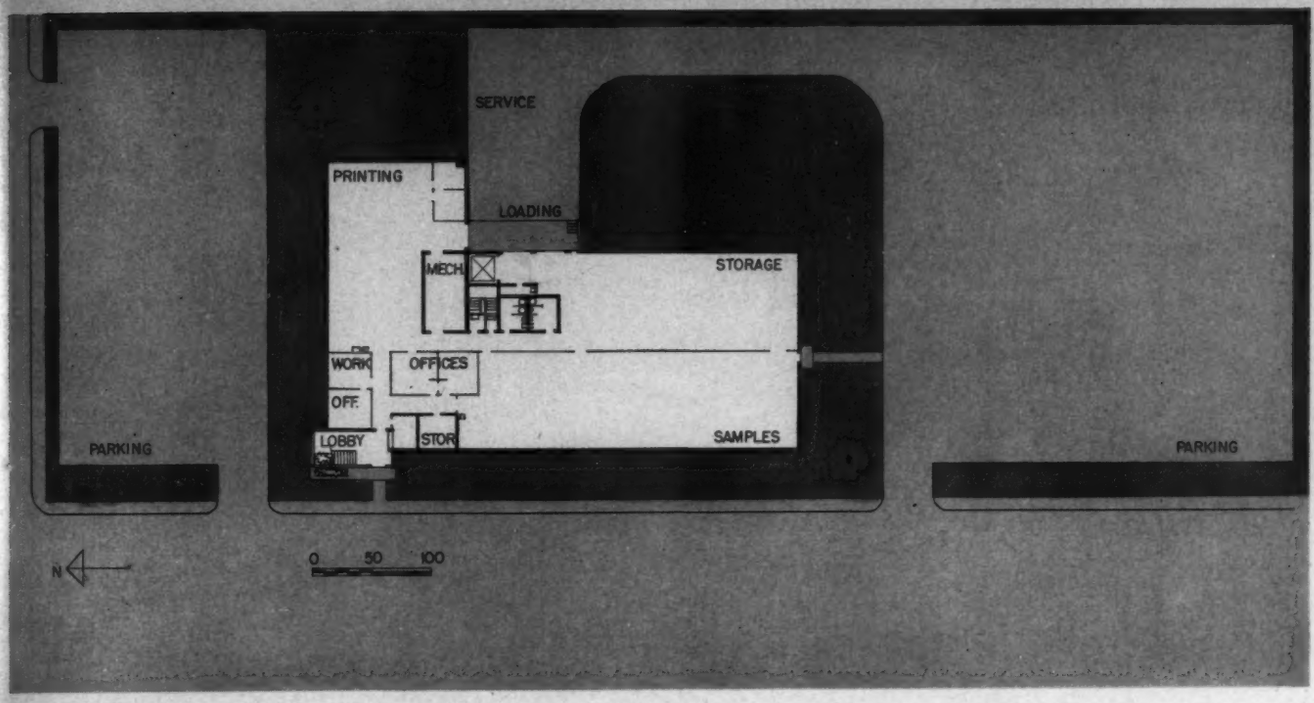
TEXTILE LABORATORY AND PRINTING PLANT IN

ADJACENT TO existing mill buildings and designed to replace crowded quarters in antiquated surroundings, this new structure for Cone Mills Corporation houses textile laboratories as well as printing facilities for the company's publication.

The two-story building contains 25,200 sq ft and was designed to be as flexible as possible, since it was difficult to foresee future requirements. Movable partitions and portable heating and cooling units were provided for that reason. The architect recommended a windowless building, but a number of fixed glass panels were installed at the owner's insistence.

The first floor contains the print shop, fabric sample department, and space for shipping and storage. The second floor contains an office area, library, large laboratories for physical and chemical testing and research, a reinspection area, and smaller auxiliary laboratories for special work in fabric shrinkage, microscopy, electronics and cotton fiber analysis.

The walls are of brick outside and painted concrete block inside with fixed panels of heat absorbing glass; the frame is steel; partitions are movable office type; floors are plastic tile or cement finish; ceilings are acoustic tile or exposed framing; heating and cooling units are movable for flexibility; the building is sprinklered and lighted by fluorescent fixtures.



THE SOUTHEAST

Location:
Greensboro, N. C.

Architects:
Lowenstein-Atkinson Associates

Contractor:
English Construction Co.



Joseph W. Molitor



THE JOHNS-MANVILLE RESEARCH CENTER SIX YEARS LATER

*by Clifford F. Rassweiler, Ph.D.**

Note: This is the story of how one of the earliest of the "campus-type" industrial research centers has actually performed during the six-year period since it was dedicated. The experience is told (from the owner's viewpoint) by the J-M official most closely identified with the center's inception, policy and future development.

For the full architectural presentation of this group of buildings, refer to ARCHITECTURAL RECORD of October, 1949.

— J. S. H.

IN 1945 ground was broken for the new Johns-Manville research center on a 93-acre tract adjacent the company's Manville, N. J. plant. Before that time, research and development had been carried on in the factory buildings and these facilities were outgrown; did not lend themselves to expansion.

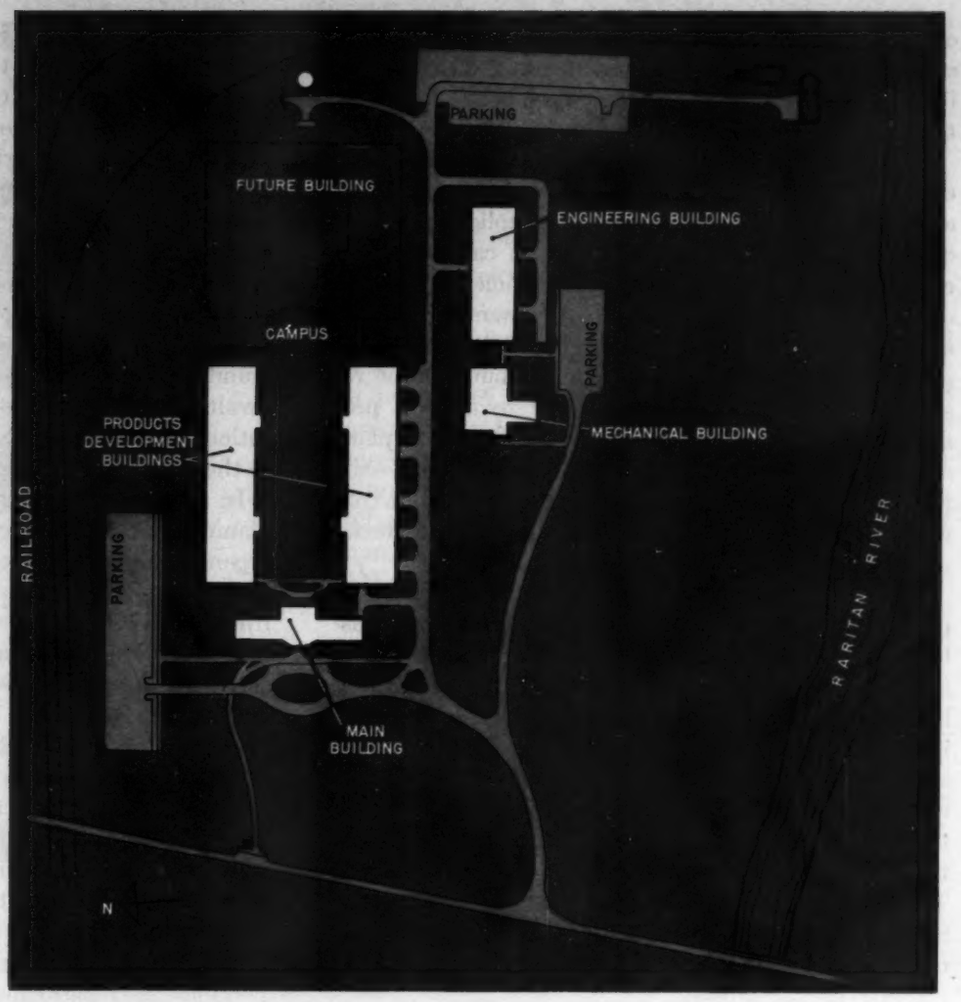
The design was influenced by two considerations. First, the research and development organization for J-M is responsible for all experimental work affecting product quality. Involved are basic research, product development and design, construction and operation of experimental machinery for eventual factory operation. Next, the business is diversified, our company manufacturing more than 400 different lines of products distributed among 22 major businesses. Each of these requires, in effect, its own research and development organization.

Before the architects were named, preliminary study of the design was given direction when a staff architect worked out with each section head a layout for the space he wanted. These areas varied widely in size and shape, but each head was eventually convinced that his needs could be met in a uniform group of work centers. The laboratory module became 11 ft by 26 ft with a window at one end, a door at the other, and work benches or equipment along the sides. Movable walls

** Dr. Rassweiler is vice-chairman of the board and vice-president for research and development, Johns-Manville Corporation.*



Photo for Johns-Manville by Ted Czarda



Location: Manville, N. J.
Architects: Shreve, Lamb & Harmon Associates
Structural Engineers: Purdy & Henderson Associates
Mechanical Engineers: Syska & Hennessy
Landscape Architects: Clarke, Rapuano & Holleran
Supervision: J-M's Department of Engineering
Builder: Turner Construction Co.

made it possible to include one or several modules in a given area. This idea was a departure from pre-war concepts, which usually consisted of individually planned work areas of assorted sizes and shapes, difficult to change due to fixed partitions, furniture and service plumbing. Since completion in 1949, operating experience has demonstrated that the standard module can be used for practically all work. Out of a total of 124 module laboratories, only a few special size rooms have been required, and these were gained by breaking up nine multiple-module laboratories.

At the time our center was planned there was a trend toward movable partitions, sectionalized furniture, and easily removable or replaceable plumbing. As a manufacturer of movable walls, J-M of course made maximum use of this concept. All the walls in the center are relocatable, particularly those separating work spaces. All laboratory furniture is constructed in two- or four-foot sections with desk top slabs in corresponding sizes. Individual units are easily moved or replaced. Since 1949, 28 walls have been installed, removed or relocated. These moves were caused by changes in executive responsibility, minor relocation of research sections, and the addition of new equipment, such as an electron microscope and spectograph apparatus. Also, 300 pieces of furniture were installed or relocated and about 700 individual services (pipe or electrical) were moved. All of these were minor operations performed by service personnel as routine maintenance chores.

Precedent had generally called for pilot plant experimental space in separate buildings. Thus it was another innovation when large pilot plant bays, adjoined by two stories of modular laboratories, were provided in each of the two product development buildings. These bays extend the complete length of the two buildings and provide an area 572 by 100 ft in each for pilot plant equipment. This design has led to close collaboration between pilot plant and laboratory personnel working

on the same product or process. Supervision has been simplified and personnel requirements reduced, since research workers can divide their time between laboratory and pilot plant without undue loss of time.

In addition, the large pilot plant areas have permitted carrying on nearly all the company's experimental processes on equipment large enough for duplication in the company's numerous plants. Products can be tested either on small-scale or full-scale equipment. This enables development engineers to experiment with products or processes before introducing them to commercial production. In many cases equipment built at the research center is transferred directly to a plant production line. Another advantage of the pilot plant arrangement is its occasional use for actual small-scale production of new products to permit an interim trial marketing period before sales warrant full commercial manufacture.

While the modular laboratory arrangement and pilot plant development were major contributions to industrial research design, there was another objective achieved in the building of the center that has proved both successful and worthwhile. Before the war ended, it had become apparent that technical personnel of outstanding caliber would be difficult to find and keep in competition with other companies. Therefore the architects were instructed to pay special attention to making the center as attractive as possible, both inside and out. The site chosen offered good landscaping opportunities and the buildings themselves were designed to be of a character such that the ensemble would resemble a modern college campus.

There was emphasis on adequate natural light and all the laboratories were air-conditioned. Attractive interior color combinations were chosen for the movable walls of asbestos cement, which have proven resistant to marring and economical to maintain.

The company has been amply rewarded for its concern in making the center attractive. In the past two years, turnover of technical personnel has been less than four per cent per year from all causes — an unusually low figure which is a source of pride. Research heads firmly believe that the low turnover is due to making the center attractive to the people the company wanted to have in its research organization. There have been, in addition, public relations and promotional values with both customers and visitors, who see here a building materials firm practicing what it preaches.

Also important is the effect of the center on its community. First, employees of both the nearby plant and the center itself are proud of its appearance, and this spirit carries over into the town. Next, the facilities of the center are made available to a wide variety of community groups, who also find the employed personnel invaluable in a surprising number of civic, youth, educational and cultural activities. This, of course, redounds to the credit of the company.

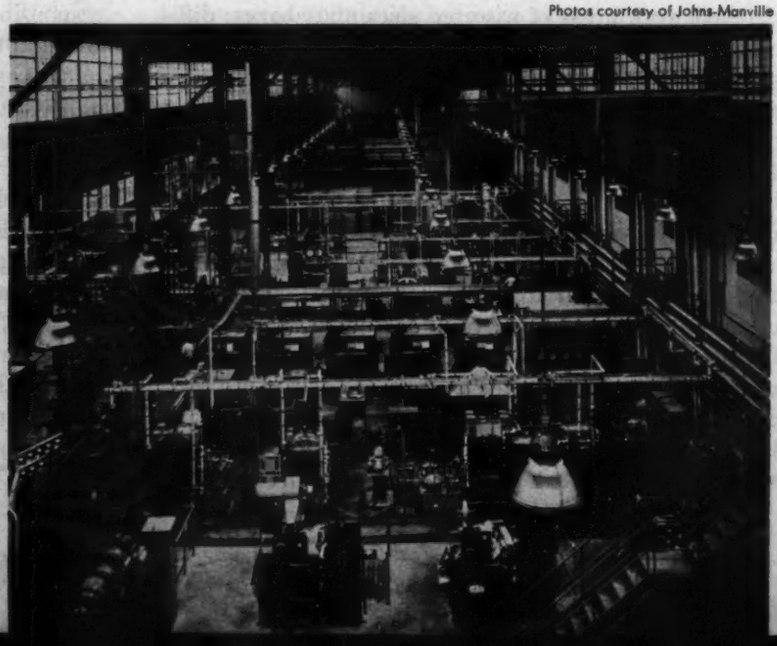
In reviewing the original design for the center and planning for the future, the Johns-Manville research organization would recommend two major changes. First, the pilot plant bays would be enlarged in length from 100 to 120 ft, since experience has shown that more length is needed for certain operations. The cafeteria serves both research and engineering personnel and its facilities are overtaxed. The company is convinced that attractive luncheon facilities promote the interchange of ideas between scientific workers whose tasks seldom bring them into contact otherwise and would favor a larger cafeteria with adjoining kitchen.

Other minor improvements might include such items as: recessed doorways to prevent the hazard of doors opening into corridors; additional access panels in suspended ceilings to eliminate carpenter work when repairs are made; stronger trench gratings in pilot plant areas for greater carrying capacity; fewer loading doors in pilot plant areas to protect against outside temperatures; fixed sash to maintain air-conditioning standards and decrease drafts and rain leakage; additional storage for flammable liquids; fluorescent lighting troffers with hinged lenses for easier lamp changing.

Such changes will, of course, be considered when future buildings are added to the center. Nonetheless, the center as built can honestly be termed a great success, both financially and esthetically.

Photos courtesy of Johns-Manville





UNPREDICTABILITY—MARGIN FOR INSPIRATION



By Joseph Brown
Associate Professor of Sculpture
Princeton University, School of Architecture

THE QUICK WAY to dispose of a social problem without solving it is to blame it on the Industrial Revolution. Responsibility is then so watered-down that *personal* responsibility fades to the point of invisibility, and we can contentedly suffer without blaming ourselves. Naturally, we want material and spiritual security; unnaturally, we want it nicely wrapped and delivered direct from a factory, and guaranteed forever.

We're all involved; sculptors and architects, shoemakers and bakers; but don't go away mad — we're not choosing sides in preparation for a fight: we're trying to understand a common problem which will not solve itself.

The sculptor — the case of the architect is basically the same — has tried to escape his responsibilities by juggling forms, in one way or another. On one hand



Harriet Arnold



UNPREDICTABILITY

there is the "self-expressionist" who cannot see that self-consciousness and self-expression are not the same — that, actually, one stifles the other.

On the other hand we have the worshipper of the familiar, and each hand is so preoccupied with its own brand of sterility that we "drop the baby," the deep human need for constructive exchange that is the vitalizing spark of every work of art whether it is a building, a statue, or a loaf of bread.

A few years ago one of the classes at the University was given a grade-school as a design problem. In criticizing the playgrounds that were submitted, I pointed out that they erred in two directions. One group took the traditional playground and painted candy-stripes on every pipe above ground, as if perfume could be used as a substitute for soap and water. The other extreme offered "free forms" imitating Swedish and other European developments that had recently been publicized, developments that had contributed, but in an extremely limited way, thanks to the self-conscious approach that perceives each little step as the entire journey.

I asked if anyone had given any thought to the meaning of the word "play." No one had. Generally, it was felt to be a good way of getting rid of the children for a while — safely.

The implications of dilettantism are as deadly serious in architecture and sculpture, or teaching generally, as they are in medicine, and in this case they aroused me to an active personal interest in tackling a problem that was being tickled by almost anybody with an idle finger.

Play is nature's way of preparing the child — or any young animal — for the responsibilities of maturity, allowing him to discover his natural rights and his natural limitations, giving him the chance to find that these rights and limitations vary with the frame of reference, and inducing him to recognize that he is the same as other children as well as different from them, that individual interests and group interests are not necessarily antagonistic but that they are basically interdependent. If a supervisor is used as a substitute for good design he becomes to the child what the lawyer and the policeman become, too often, to his father — a substitute for judgment and conscience. A good play design gives the child the chance to recognize the vitality of his surroundings, through experience learning to respect the complexity of each situation even though his personal aims may be simple; and this respect is neither unreasonable fear nor a thoughtless sense of security, but an acceptance of the fact that personal designs and social designs constantly shape and reshape each other. The margin for error is the margin for inspiration; there can be no real guarantee of success. It is a dynamic process that is directed by the individual, but collaborating with his environment. And that's not grim. Unpredictability — within reasonable limits — is the basis of man's creativity.

My first design, a "play community," combined both stable and mobile elements, and spatial and material



1. The Jiggle-Ring, made of rope with a steel core, can be used simultaneously by adults and children without condescension on the part of either. Height, weight, and age are not advantages when "the joint starts jumping." 2. The Jiggle-Rail, made of spring-steel. Pressure on any part is transmitted in such a way as to demand adjustments that are, simultaneously, mental and physical. The leader in a game of Follow-the-Leader can feel the responsibilities of leadership even if he can't see them. 3. The Swing-Ring, made of rubber, rope, and steel. It can rotate and swing, depending on the efforts of the individuals involved. With the proper respect for gravity, inertia, and his fellow man, a child can learn to keep the ring swinging and going around without the aid of a pusher



3

2



Harriet Arnold



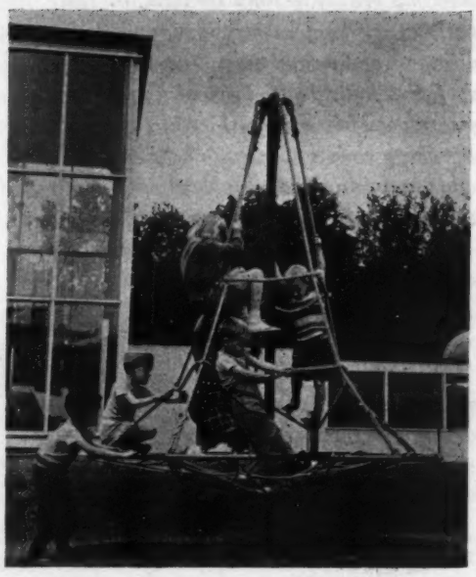
UNPREDICTABILITY

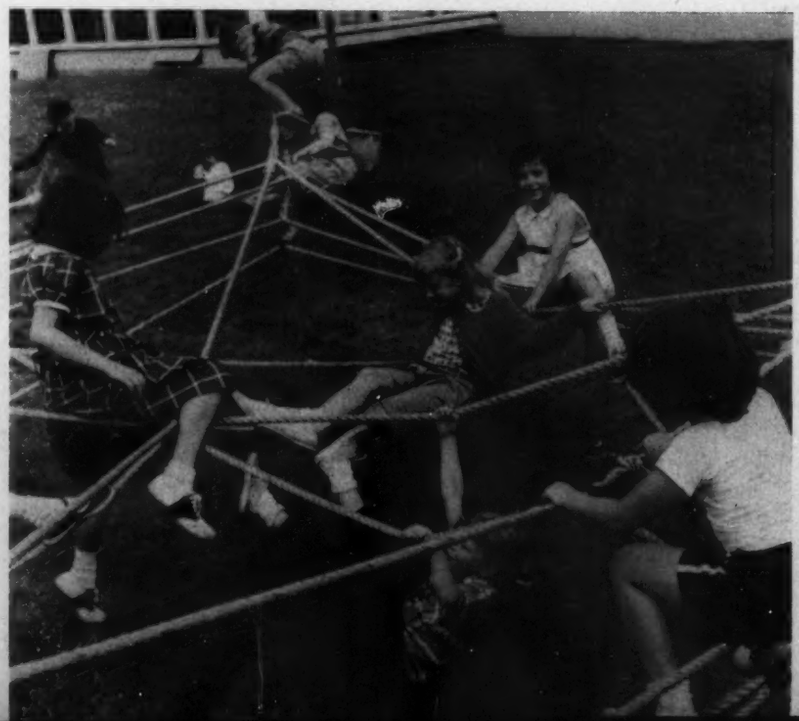


form were considered equally important. The materials utilized included steel-cored rope, spring-steel and fiber glass. The feature of the design was the fact that one child's actions affected everyone on the plot, demanding a balancing adjustment. The designs shown in this article are mobile, and were simpler follow-ups that demonstrate the same principle in different ways. The child is given practice in choosing and executing a course of action, but he is constantly reminded that change is the essence of living, that to adhere to a principle it is necessary to be able to change your mind — with balance.

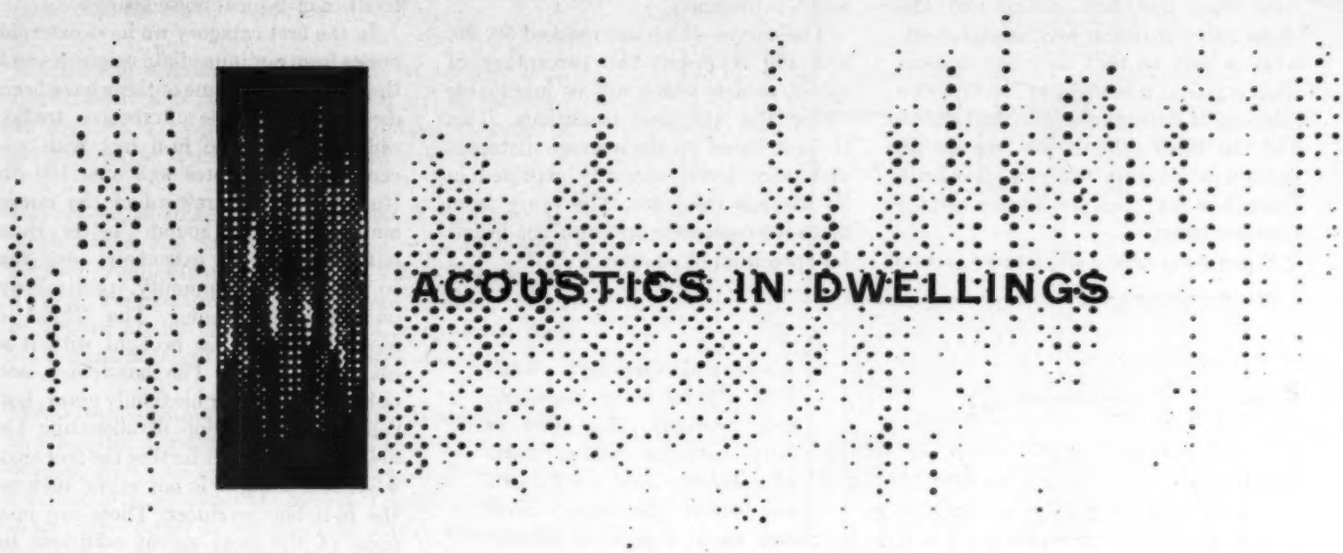
Mobility alone does not insure security, but stability doesn't either. The person who always stands firmly like a tree by the water is bound sooner or later to be hit by a truck. There is a time to move and a time to stand still or sit down, and judgment is the big factor; but judgment must be nurtured by experience above and below — as well as on — the verbal level. These designs are, in effect, non-verbal — even self-inflicted sermons.

As sculptors or architects, we tend to think of Art in terms of studios and drafting rooms, exhibitions and museums — we even try to define this word — but basically we know that we can never define or adequately explain the ever-changing and inescapable means by which we shape, and are shaped by, the world in which we live — for better or for worse. The important question is not who does what, to whom and how, but how well are we doing it.





Harriet Arnold



ACOUSTICS IN DWELLINGS

By Jack B. C. Purcell

Bolt, Beranek and Newman, Inc., Consultants in Acoustics

Based on a talk by the author at the fourth annual meeting of the Building Research Institute last April

THE problem of acoustics in dwellings has grown more acute in the past few years due to several factors: we have more neighbors, more neighbors' children (our own are never a problem), more household appliances and mechanical contrivances, more open planning and more lightweight construction. Add to this the noise from automobiles, trucks, busses and airplanes you can see why the noise levels invading our private domain have jumped. How can we possibly reduce all of these noises to tolerable levels?

Obviously, we can't do it for every noise, nor for every human being, but we can certainly make a statistical stab at the problem. By statistical we mean the significance of the reactions of a community or population to a specified type of noise.

In analyzing the acoustics problems of a proposed dwelling, we should proceed as follows: 1) establish a criterion for tolerable background noise; 2) analyze the noise sources; 3) take necessary measures for control of noise sources to satisfy the criterion.

It should be mentioned, however, that a criterion for background noise level cannot be stated in precise terms due to the many physiological, sociological and psychological variables, or — one man's music can be another man's noise.

When is Noise Annoying?

Temporal and seasonal factors are bound to have some effect on the degree of annoyance caused by noise sources. For example, the source which may determine a certain criterion might operate during the daytime hours of 9 A.M. to 5 P.M. when the occupants may not be at home. On the other hand, there may be residents who will stay in their homes during these hours (housewives, children, etc.) who are engaged in activities which do not necessarily require much noise isolation from external noise sources.

Still further, we must consider the repetitive character of the noise source. For example, an occasional airplane a few times a day may be less annoying than a heavily trafficked highway.

In winter, in northern climates, we spend a good portion of our time in fully enclosed buildings which are well insulated thermally (double glazing, etc.), and thus probably insulated from exterior sound as well. In the summer or in mild climates a good portion of our living is in open areas with sliding glass walls, jalousies, etc., which permit the house to take full advantage of the cool breezes, but admit noise as well.

Additional factors which must be considered in establishing criteria are the peak noise levels which can occur during a given day, and the effect of previous experience with noise. An interesting example of the latter may be shown in the following chart,* describing reactions of three tenant groups to floor constructions with various sound transmission losses.

	Percentage of tenants		
	50 db floors	45 db floors	40 db floors
Very disturbing	12%	23%	11%
Disturbing	14	19	12
A little disturbing	43	37	29
Not at all disturbing	31	21	48

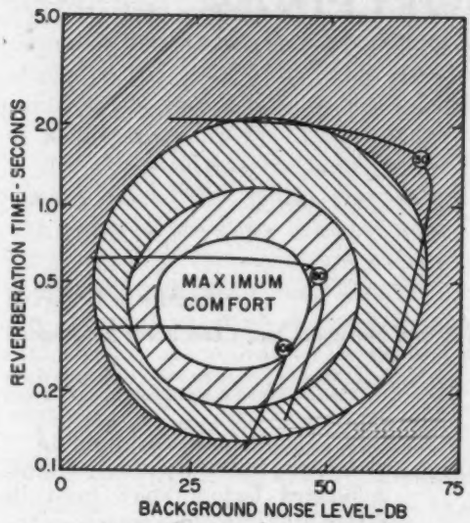
50 db, 45 db and 40 db are sound transmission losses.

Reading horizontally in the "very disturbing" tabulation, it can be seen that the 50 db floor and the 45 db floor gave a 12% and 23% tenant disturbance while the 40 db floor, which would be expected to produce a higher percentage of disturbance, only indicated 11%. This

** This data was compiled and presented in the Noise Control Journal by P. H. Parkin and E. F. Stacy of the Building Research Station in England.*

is a matter of being conditioned to a noisy environment. The 45 db and 50 db floors are in better class dwellings while the 40 db floors are in "slum clearance" dwellings. The people in the latter units had a much better living environment than they had had before and the slight noise intrusion was unimportant. Also, it may be that they like to hear what is going on next door. The first two columns of data were taken in London and the third column (for the 40 db floor) was taken in Glasgow, Scotland. Coincidentally, this is known as the Glasgow effect.

When we consider all of these factors and others not listed, it is evident that establishing a noise criterion in terms of a single number is difficult. However, we cannot expect the architect to concern himself from a practical standpoint with all of the variable factors.



Acoustical Comfort. *While it is difficult to tie down criteria precisely, this chart at least indicates relative areas of comfort. Best conditions are within the inner circle and lesser degrees of comfort in the next two. Curves with circled numbers represent the percentage of words intelligible for various conditions.*

Chart by R. H. Bolt and R. B. Newman from Construction and Equipment of the Home, American Public Health Assoc., 1951

Noise Criterion

If, in the design of housing, we can be assured that we are not located close to railroad lines, under the flight paths of aircraft near airports, and that the spectrum characteristics (frequencies present) of the noise may be one of a typical daily activity, street traffic, children playing, etc., the chart shown above may serve as a useful guide in determining background noise levels which give various degrees of comfort.

The background noise levels are shown on the horizontal scale. The reverberation time of the room in seconds is plotted on the vertical scale. This is important since the reverberation time is affected by the amount of sound absorption in the room. The areas which are hatched in the same manner are qualitative zones of equal comfort. The outer zone would be considered very uncomfortable in a residence. The inner zone represents the maximum comfort region or optimum conditions which can be realized in the home. A room which is very quiet, but very reverberant, for example, is just as uncomfortable as one which is too noisy.

The curves which are marked 50, 80, and 100 represent the percentage of speech sounds which will be intelligible under the specified conditions. This chart is based on the average distances and voice levels normally expected in an average residence. The range from 80 to 100 represents optimum conditions for speech intelligibility.

Admittedly, this chart would ideally consider in some manner the connotation of the disturbing noise. For example, the neighbor's radio program may be very pleasant if it is background music, but on the other hand, a mystery thriller may be bothersome. The importance of the connotation of the intruding sound cannot be overemphasized. If a person knows that a neighbor is aware of his every action, the resulting inhibitive effect on his daily life can, in extreme cases, result in an unhappy family.

In summation, the chart which is presented for the qualitative zones of relative comfort in residential rooms is based on cultural conditions more than psycho-acoustical conditions. Obviously, the data in this chart is not valid in all conditions. For example, the residents in the immediate vicinity of the Bells of St. Peter's Cathedral in Rome (if not already stone deaf) probably enjoy the musical interludes.

Kinds of Noise

The application of acoustical planning to the design of dwellings need not be a hindrance to the architect since many improvements can be realized by attention to small details. Before we consider the basic planning aspects for achieving the pleasant acoustical environment, let us review some characteristics of typical noise sources.

In the first category we have external noises from our immediate neighbors and the community. Some of these have been discussed earlier — automotive traffic, railroads, etc. The hi-fi bug with accentuated bass notes well over 100 db (to reap the full reward of the music and to make it sound "better than natural") can be extremely annoying to the entire community, particularly on a summer evening. The "Build it Yourself" craze has brought with it a bit of noise too. The handyman not only can be driving his family crazy, but can do a superb job of alienating his neighbors. Consider further the fact that while it is loud, it is not music such as the hi-fi bug produces. These are just some of the more recent additions to possible neighborhood sources of sound. It is this group of noisy neighbors which continues to increase the requirements for noise isolation.

Any comprehensive listing of internal noise sources would require far too much space in this article. Obviously, we cannot go into detail on each of these sources, but we can discuss some of the more important ones.

Let's start with the bathroom. Present-day flush valve and tank type water closets, with some exceptions, can be extremely annoying, particularly in the late hours. It is not uncommon in housing of lightweight construction that the parents are reluctant to flush toilets after the children are in bed. This is as unnecessary as it is unsanitary.

To reduce the level of noisy water closets we must consider the airborne and structure-borne paths of noise. Isolating the stack from the floor construction by means of a resilient support, secured, if possible, to a masonry wall will reduce structure-borne vibration. An additional gain can be realized by mounting the WC on a resilient pad. For controlling the airborne sounds, let's eliminate the undercut doors and replace them with solid core doors, completely weather-stripped or at least tightly fitted. If these simple measures can be carried out, the noise from a bathroom will be greatly reduced.

And then there is the problem of back-to-back bathrooms with recessed medicine cabinets, not to mention the

SOME NOISE PROBLEMS AND THEIR PREVENTIVES

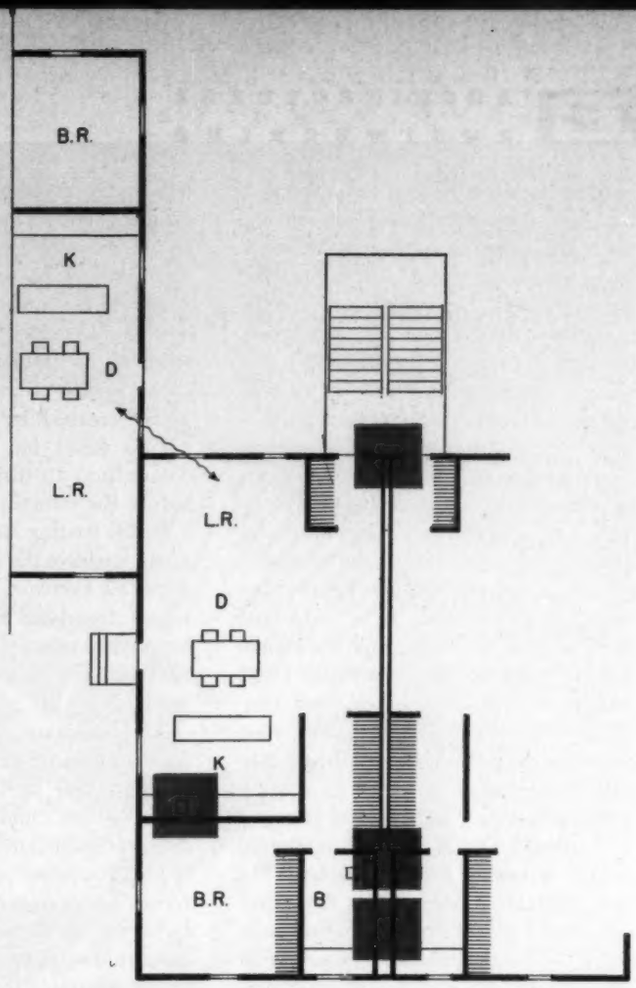
Adjoining apartment doors: *it is desirable to separate the common jamb with a resilient strip, to hang the doors from the masonry rather than the furred section, and also to mount the door stops on the door jamb rather than the interior partition*

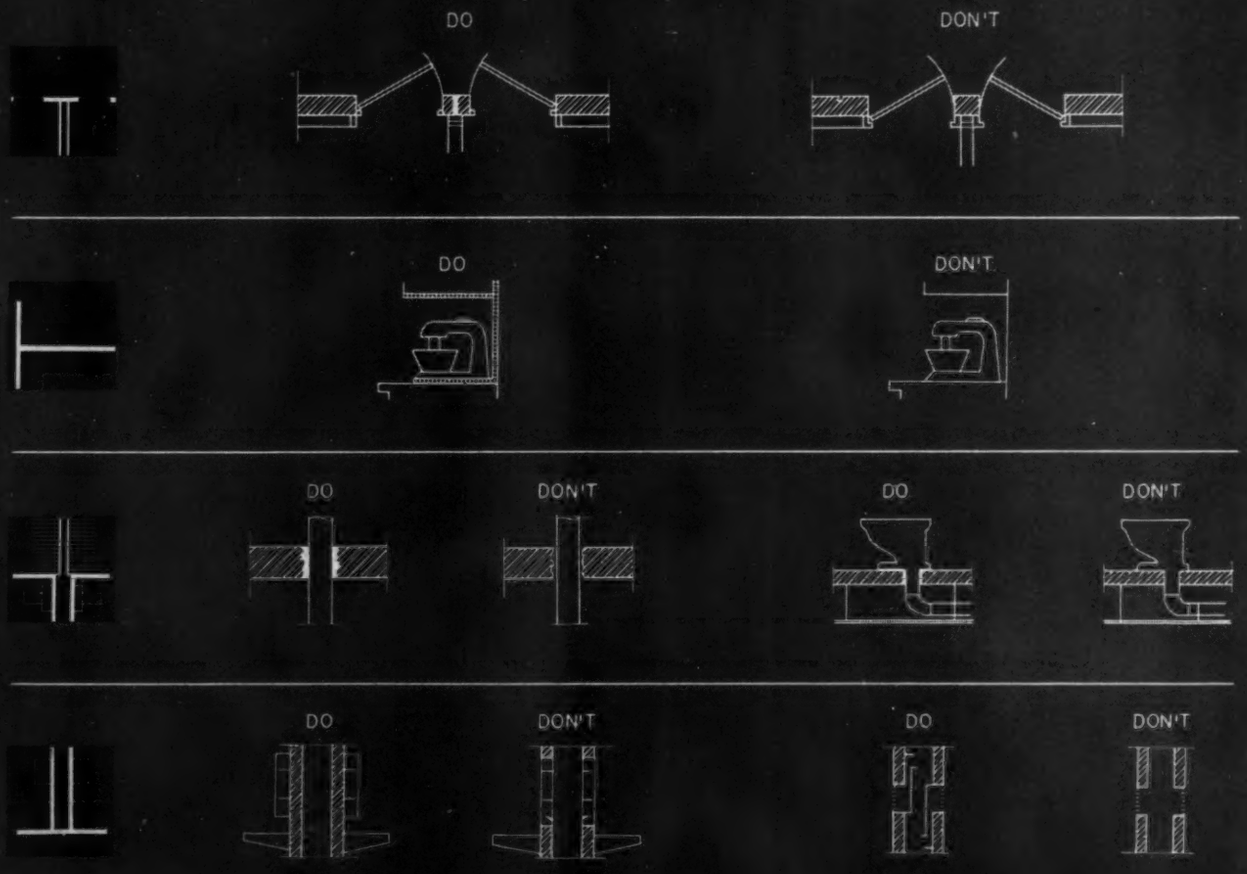
Kitchen appliances: *some quieting of portable units can be achieved by providing a resilient pad on the counter top and by installing sound-absorbing material at the back of the counter and under the cabinets*

Bathroom plumbing: *pipes common to several apartments should have caulking where the pipe passes through the floor to keep sound from traveling. The WC can be less noisy if it is mounted on a resilient pad; caulking should be applied around the waste pipe. A hung ceiling tied to the waste pipe will act as a sounding board*

Medicine cabinets and vent ducts: *if possible, surface mounted medicine cabinets should be used rather than recessed ones, particularly since razor blade slots can transmit a lot of annoying sounds. Common vent ducts should have baffles to cut down on sound transmission*

Note: windows set at 90° which "look" into the neighboring apartment, as used in this plan, should be avoided





back-to-back razor blade slots. Remember that these small openings have a unity transmission coefficient and seriously reduce the sound isolating properties of the wall. Let's surface-mount the medicine cabinets and use the handy disposal containers furnished by the blade manufacturers. Those of us who use electric razors have no problems.

In vertical arrangements of apartment house bathrooms the rigid tie of the plumbing stack to the ceiling below can be a very efficient sounding board for undesirable noises. Let's be straightforward about this and face the problem for what it really is. It is disturbing to the occupant on the lower level when he can distinguish the performance being enacted on the upper level, and conversely, disturbing to the performer when he knows his performance is distinguishable. Enough said!

Silent mercury light switches are a very simple solution to the nocturnal clacks caused by noisy switches. The cost difference amounts to a little over $3 for the average three-bedroom house, and it is money well spent. If you don't use the quiet type switch, at least keep the switch off party walls. The sound is actually magnified on the neighbor's side.

Food blenders, automatic knife sharpeners, etc. can be quieted to some extent by the use of close-in sound absorption and a resilient pad. Appliances such as dishwashers, garbage disposal units, automatic washers and driers, vacuum cleaners, etc. actually require research by the respective industries for reducing the noise at its source. The manufacturers are certainly aware of the problem and great strides are being made by research in industry to determine the causes and treatment of the noise source. In the meanwhile, resilient mounts and flexible hoses for dishwashers, rubber connections to disposal units, etc. can reduce the structure-borne vibrations.

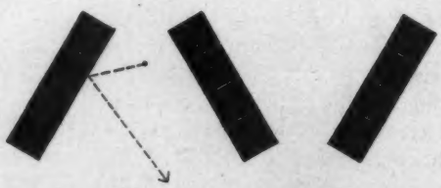
In the heating and ventilating department, we have the problem of the forced warm air systems. A plenum lined with sound absorbing material both in the supply and return ductwork can do much to reduce the fan noise to a satisfactory level.

The hardware industry can make its contribution to the control of noise by concentrating on the design of quieter door latches, and quiet sliding door hardware which does not rudely awaken the light sleeper in an adjoining bedroom. These and many more problems have yet to be solved before we can achieve the optimum acoustical environment.

What can we do in the basic planning of apartment buildings and single family dwellings to achieve additional noise isolation with a minimum of expense? Vertical planning has the inherent fault from an acoustics standpoint of vertical plumbing stacks and exhaust ducts common to bathrooms on different levels.



Parallel wall surfaces of apartment buildings set around a courtyard make exterior noise worse by causing flutter echos



One solution would be to angle them as shown here



Or it would be even better to group them in this way

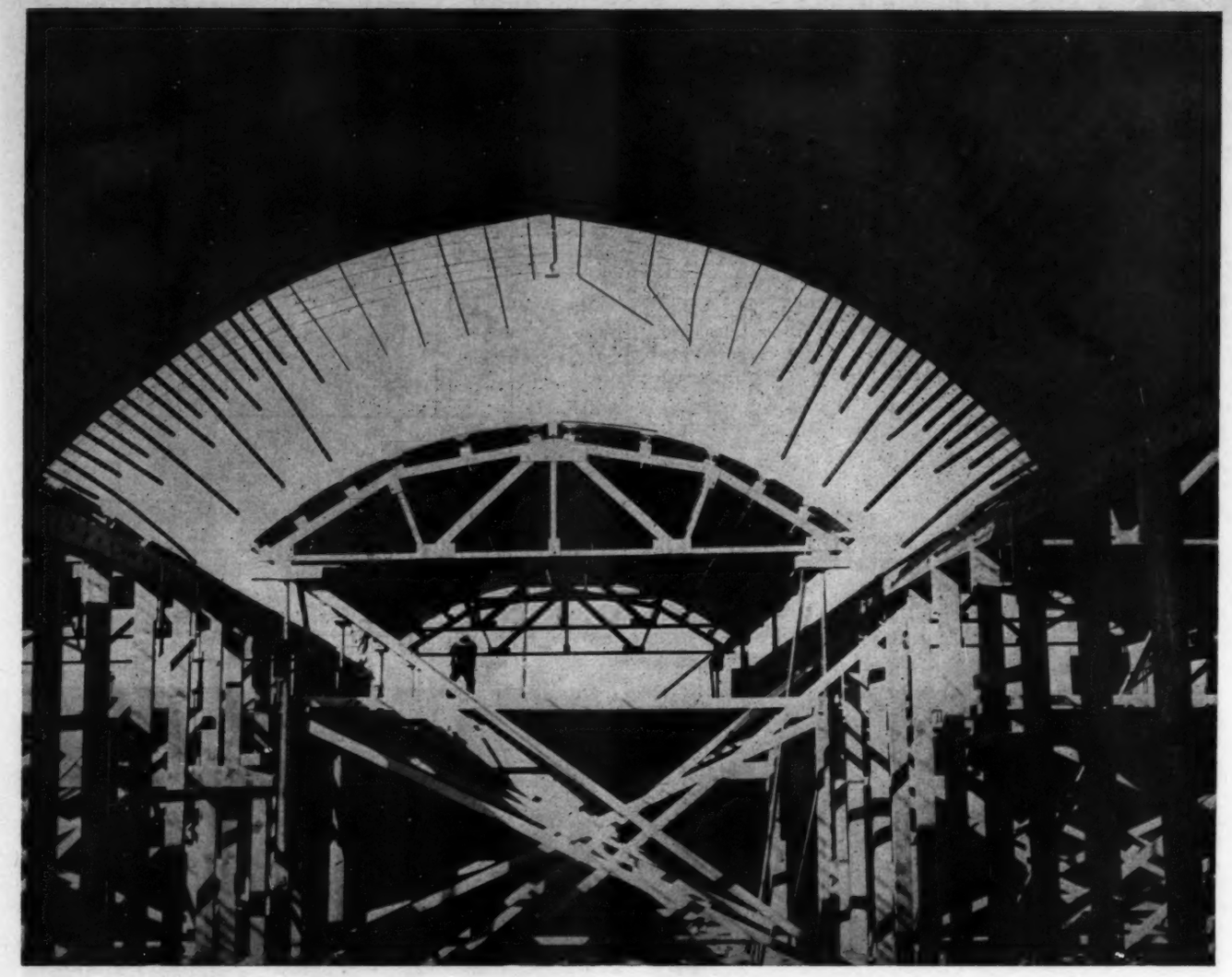
There is also the problem of impact noises (foot-falls, pianos, and radios) being transmitted to the apartment below.

Horizontal planning can eliminate many of these problems at their source. For example, walls between adjoining apartment units can be of heavy construction which is, of course, the ideal method for isolating airborne sounds. Heavy construction in floors is more prohibitive because of the increased cost requirement in steel and concrete. Windows set at 90° which look into the neighboring apartment should be avoided. Casement windows of adjoining apartments when located close together should not open so that sound is reflected from the windows into the adjoining apartment. In other words, the windows should open away from the adjoining apartment. Back-to-back closets of adjoining bedrooms can provide additional sound isolation above the single wall construction.

In horizontal planning of dwelling units, beware of the courtyard! Parallel wall surfaces give rise to extremely-annoying flutter echos which intensify and prolong the noises.

A short note on open planning — here the architect in his desire to give the visual effect of a continuum of space which is certainly desirable, introduces some difficult acoustics problems. The situation is aggravated by the fact that contemporary finishes of exposed stonework, terra cotta and flagstone are excellent sound reflectors and do not provide any sound absorption. In addition, the lack of carpeting and the use of wood, plastics and wrought iron furniture does not provide the sound absorption that is furnished by overstuffed couches, etc. The highly reverberant character of the modern living room magnifies the noises of general activities to a point where it jangles the nerves. Sound absorbing material on the ceiling can do much to improve this condition.

No solution is yet available for achieving a satisfactory degree of noise isolation when lightweight prefabricated partitions and closets are used. The architect contemplating this type of construction should give serious thought to the resulting lack of privacy. There will be times when his client will want peace and quiet and will not have it if any member of the family is in a noise making mood. Perhaps the solution here lies in the master of the house asserting himself!



BARRELS FOR A BOWLING ALLEY

Kelley's Bowl, Honolulu, T. H.

Wimberly and Cook, Architects

Richard R. Bradshaw, Structural Engineer

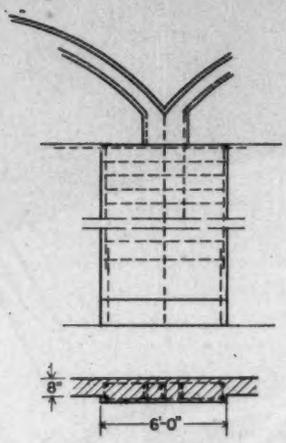
Nordic Construction Co., Builder

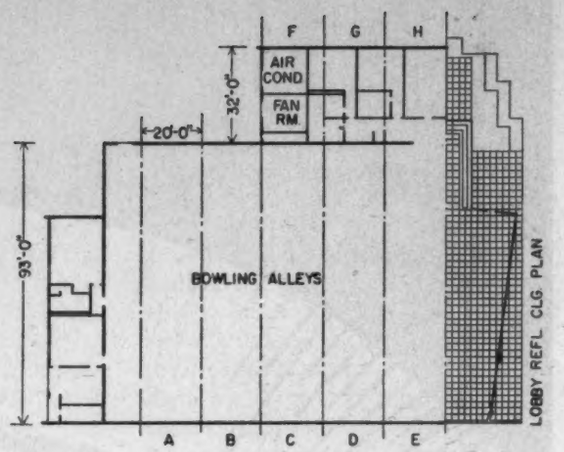
The secret to bringing down the cost of thin shell concrete roofs is multiple use of forms. For this structure, a series of rolling forms, raised and lowered by screw jacks, were set in three different positions for concrete pours to make five, 93-ft long, 3-in. thick, barrel shells which cover 16 bowling alleys. Three other 32-ft shells provide the roof over offices and equipment rooms, while a waffle slab is used over the lobby to reduce the number of columns necessary by cutting down on the weight. Under building conditions in Honolulu, it was cheaper to use thin shells than conventional trusses carrying a plaster sawtooth ceiling. The excellent quality of concrete work available was an added factor in favor of thin shells; good plastering is difficult to procure.

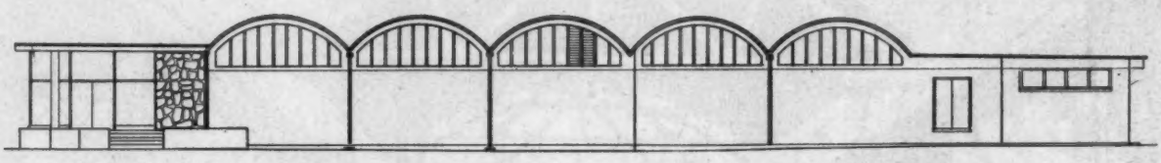
The need for proper spacing of lighting fixtures and acoustical considerations were the main determinants in the spacing of the shells. Low points of the shells made natural shielding points for concealing the lighting. The architects offer a word of caution on the acoustics of such a roof structure for use over a bowling alley: the circular forms of the barrels, even though treated for sound absorption, provide lens shapes in which sound is focused and bounced off the faces of the alleys, causing various sound densities at odd places throughout the building. They recommend a thorough study by acoustical consultants in order to avoid cut and dry "correction" after the building is completed.

Originally the architects thought that air conditioning ducts could be run on top of the roof, with holes being left for outlets. But after consultation with the structural engineer, they found that best placement of outlets would coincide with high areas of stress in the shell. (Ordinarily barrel shells are ideal for incorporation of cut-out areas — glass, for example; but in this case the barrel is only a small section of a cylinder, giving a different stress picture than, say, with half a cylinder.) Horizontal stresses at the edges of the two outside barrels are taken by flat-roofed areas over the lobby and working areas, respectively.

The five 93-ft long shells are suspended like simple beams, the sole support being piers at each end, 6 ft by 12 in. Three 32-ft shells cover the offices, equipment rooms and locker rooms. The lobby roof is a waffled slab to cut down on the columns needed









Five forms like this were used for pouring the 93-ft shells in three sections. Forms were built well because of future need



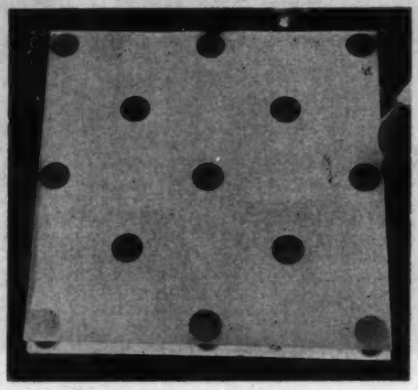
After the first 31-ft section was poured, forms were slid on dollies to the opposite side and finally to the middle section



Here the middle and last section of a large barrel is being poured. The forms have screw jacks for raising and lowering



The form is being positioned for one of the three 32-ft barrels. Reinforcing steel projects to make a tie with the 93-ft shell

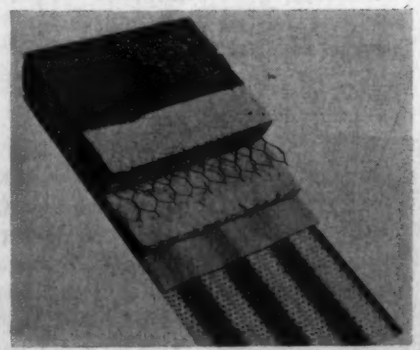


TRANSLUCENT PLASTIC PANELS HAVE POLKA-DOT EFFECT

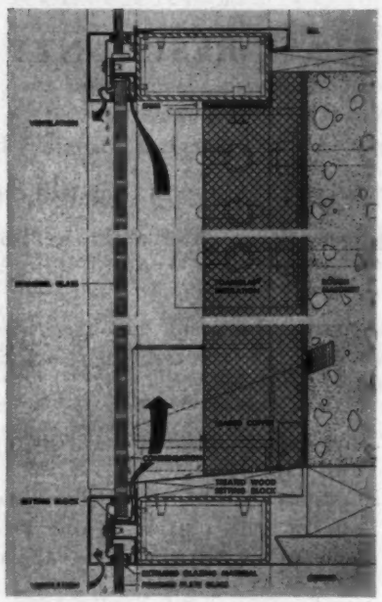
These panels consist of two flat sheets of reinforced plastic held together by 2½-in.-thick disks of expanded cellulose material which are permanently bonded at regular intervals between the two sheets. Light passing through the wall outlines the cylinders creating a luminous and decorative polka-dot effect. Available in sizes up to 4 ft wide and 10 ft long, the panels can be obtained with facing sheets in almost all pastel shades and white. The manufacturer expects the greatest use will be as side panels for building entries, as decorative walls and screens in hotels, restaurants, theaters and lounges and for illuminated signs. Resin and raw materials from Naugatuck Chemical Co. and Monsanto Chemical Co. are used in the manufacture of the panels by the *Russell Reinforced Plastics Corp., Lindenhurst, L. I., N. Y.*

ACOUSTICAL ROOF SYSTEM

Structur-Acoustic is a galvanized, corrugated steel sheet perforated with a grid of holes 5/32 in. in diameter and spaced about ½ in. on centers which serves two main purposes in a fire-resistant, acoustical roof system. It acts as a structural deck for the rest of the roof and provides a hard, durable, paintable underside for the acoustical ceiling. On top of the sheets, as shown below, go a phenolic mat and a ½-in. thickness of fiber glass insulation batt to absorb the sound. Over that is poured lightweight insulating concrete, generally about 2½ in. thick, with a light wire mesh embedded in it, and on that is placed the built-up roof of layers of tar and gravel. The entire depth, from ceiling to roof, is normally less than 5 in. The assembly weighs less than 8 psf, yet will carry over 130 psf on 6½-ft spans at ultimate strength. Tests performed on the system using a 2½-in. lightweight insulating concrete showed the following minimum properties: noise reduction coefficient — .65; U factor — .14. *Granco Steel Products Co., 6506 No. Broadway, St. Louis 15, Mo.*



(Products continued on page 262)



MULTI-COLORED GLASS PANELS

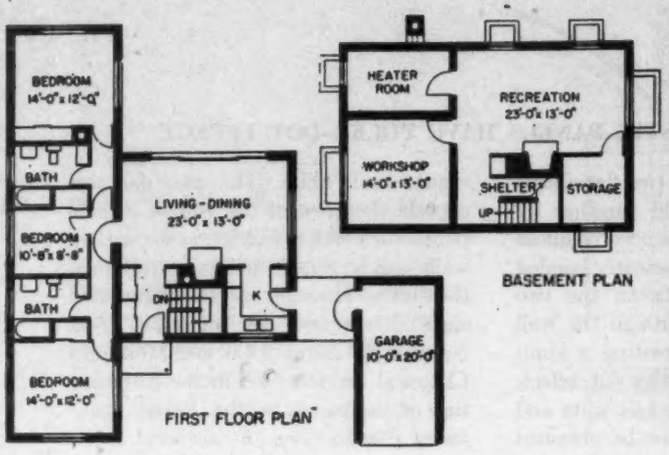
Large glass building panels, produced by fusing ceramic color to a plate glass base, not only add color to building exteriors but also are claimed to have far greater shock resistance than ordinary plate glass of the same thickness. *Spandrelite*, manufactured in panel sizes up to 48 by 84 in., is framed in Pittco Metal in aluminum, stainless steel or bronze, as in the section at left. The color side is mounted on the interior of the building, thus providing the additional weather protection of ¼ in. or more of glass. Eight standard colors are provided in a choice of polished plate glass or twill textures in opaque finishes. Custom colors and textures are also available. *Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22.*

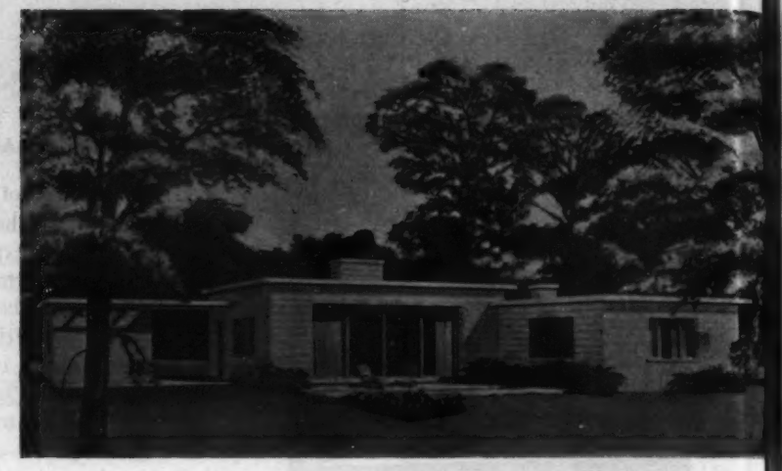
VENTED FLUORESCENT LIGHT TROFFERS

Installed in various areas throughout the Republic National Bank in Dallas, the troffers pictured at the right, only one of many specially designed for the building, have vented end plates which provide exhaust facilities for the building's air conditioning system. Air is drawn into the plenum above the suspended ceiling and then out through exhaust ducts. The end plates, shown in section, have 8 sq in. of vented area, the maximum permitted when the Underwriters' Laboratories, Inc., label is used. The recessed troffer, finished in aluminum, is used with 40-watt, T-17, 60-in., low-brightness lamps. With the units spaced 5½ ft on centers in a ceiling 11½ ft high, the average light intensity is 50-ft-candles. *Curtis Lighting, Inc., 6135 65th St., Chicago 38, Ill.*









CAN A HOUSE BE BLAST-RESISTANT?

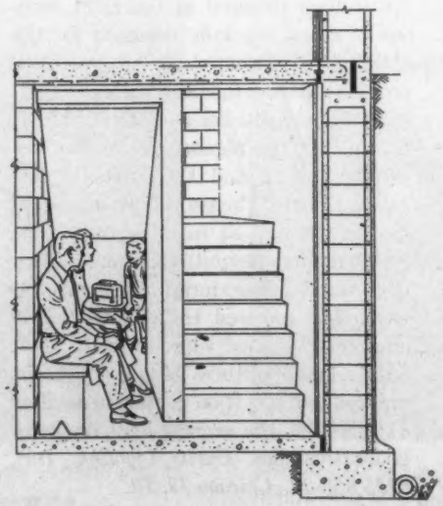
Not completely — but "Survival House" has been designed as a prototype for houses that will resist pressures more than 2½ times those which collapsed houses in Japan

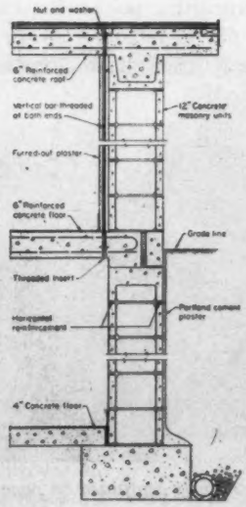
A reinforced concrete masonry house has been designed to show (1) that houses *do not have* to be doomed by blast and fire and (2) that blast-resistant features can be integrated into a house at a cost of less than 10 per cent more than average house construction costs.

"Operation Cue," the nuclear tests conducted last May at Yucca Flats, Nev., proved that a concrete masonry or precast concrete house can stand up under the pressure of a large atomic bomb — equivalent to 35,000 tons of TNT — within less than a mile of ground zero. Photographs on the facing page show the two houses, before and after the blast, which remained standing. Both were constructed on "Doomsday Drive," 4700 ft from the blast, and both suffered only slightly cracked walls and broken windows.

"Survival House," designed for the Portland Cement Association by Ellery Husted, architect, of New York, and Ammann & Whitney, consulting engineers, New York and Milwaukee, has many of the same design and construction principles of the two "Doomsday Drive" houses and adds some others which make it not only blast-resistant but also resistant to the natural hazards of earthquake, fire, tornado and hurricane. The most important principles of its construction — and these have been proved in full-scale tests or by experience — are these:

1. Fire-resistant building materials are used throughout.
2. Construction with thicker-than-usual exterior walls provides greater protection from blast and direct radiation.
3. All walls and partitions are reinforced specially to increase their resistance to blast pressure.
4. The concrete roof and first-floor slabs are heavily reinforced.
5. Interior partitions are located strategically, without sacrifice of room space or livability, to reduce the roof spans and to brace the exterior walls.
6. Large windows and doors permit partial balancing of the blast pressures. They allow some of the pressure to enter the house instead of distorting continuous wall areas, thereby helping to equalize pressures on both sides of the exterior walls and on the un-





dersides and topsides of the roof and first-floor slabs.

7. A shelter that is an integral part of the basement provides protection against blast, thermal flash and radiation. It has a much stronger-than-usual overhead slab and ready exit to the outside by means of reinforced concrete stairs and basement windows (if the stairs are blocked).
8. Emergency living accommodations in the basement include a storage room for provisions, a shop for repairs, a living and recreation room and a fireplace for emergency cooking if gas and electricity fail.

These principles have been carried through in an average, one-story, flat-roof house that will withstand pressures more than two and a half times those which collapsed houses in Japan. It is designed to remain standing under blast pressures of approximately 360 psf. As shown in the cross-sectional drawing, both the basement and above-ground walls of the house are of 12-in. rather than conventional 8-in. concrete masonry blocks. In addition ⅞-in. vertical steel bars are spaced 2 ft apart in the inside face of the exterior walls for reinforcement. These rods are threaded into inserts in the floor slab, then tightened and anchored by means of plate washers and nuts recessed in the roof slab. The rods are hidden behind fire-resistant furring and plaster, so that the interior sides of the exterior walls appear as normal plastered walls. The rods hold the roof and floor slabs securely against the top and bottom of the walls, so as to compress the blocks slightly and prevent inward buckling under heavy blast pressures. Both the first-floor slab and the roof are 6-in.-thick instead of the usual 4-in.-thick concrete. The increase in slab and wall thickness and the addition of vertical reinforcement increases substantially the blast resistance of the structure at a relatively small increase in cost.









The two lightweight concrete houses located on Doomsday Drive, ⅞ mile from the Yucca Flats atomic blast, are shown before the blast (above) and after the blast (below). The houses were four-room-and-bath models of conventional construction containing approximately 1000 sq ft of living space. Both had identical, flat, overhanging roofs of 6-in. reinforced lightweight concrete weighing about 45 psf. The concrete masonry house (left), reinforced vertically with ½-in. steel rods, rested on a flat slab foundation which had a thickened edge forming a beam around the perimeter. The precast concrete house (right) was on a foundation of drilled piers, the tops of which were 14 in. below the level of the finished floor. Wall and partition panels were placed directly on the piers so that the slabs themselves acted as beams. Neither house suffered any important structural damage, and equipment and furniture were well protected. Windows and doors were blown out of all houses, including similar ones 10,500 ft from the blast, and all walls were slightly cracked

The interior partition walls are exposed concrete masonry painted with Portland cement paint. They contrast with the plastered interior surfaces of the exterior walls. A large glass expanse, to provide pressure relief, is accomplished with a picture window in the living room consisting of two thicknesses of ¼-in.-thick polished plate glass with a ¼-in.-thick sealed air space between them.

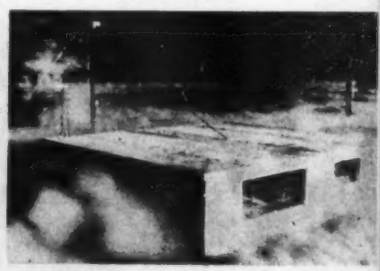
Survival House is designed not only for protection against the blast but also for survival after the blast. The emergency living accommodations and shelter in the basement are all-important, according to tests conducted by the Federal Civil Defense Administration. The shelter, shown in the cross section, is in effect a concrete walled room separated from the recreation and living area of the basement by a massive concrete fireplace, which shields against heat, blast and radiation entering through the basement windows. It offers approximately 30 sq ft of space, which will accommodate five persons easily and six persons without discomfort over a short period. It is located beneath the concrete stairway and landing in an exceptionally well-protected area where maximum protection from debris, collapse and radiation is provided. Minimum ceiling height is about 4 ft. The stairway itself is capable of withstanding 1900 psf of pressure, more than 45 times the usual building code design requirements for residential stairways. The stairs lead directly to the entrance vestibule above and then outdoors.

The architect and engineer estimate that if a hydrogen bomb 1000 times more powerful than the Hiroshima bomb were exploded over the center of a large city, the additional investment of less than 10 per cent to build a "Survival House" would probably save 70 to 80 per cent of the houses located on the periphery of the city. The additional cost might be wholly or partly offset by the anticipated longer life and lower insurance rates resulting from the strong, firesafe construction as well as by lower maintenance costs.

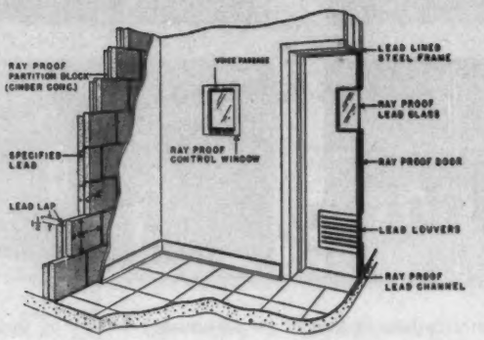
(Roundup continued on page 248)







Reinforced concrete masonry house at instant of explosion, as thermal waves charred telephone poles and as the blast struck, driving clouds of dust against the walls



X-RAY PROTECTION

Ray-proof blocks are shown in this cutaway of a typical protective enclosure from a catalog containing information on methods of medical X-ray and radiation protection as well as on industrial Ray-proof enclosures for non-destructive inspection. Data are given also on Ray-proof lead lath, insulated panels, floor and ceiling systems, doors and doorframes, lightproof windows, louvers and shades, and pass boxes. *Ray Proof Corp., 513 W. 54th St., New York 19, N. Y.*

Floor and Wall Tile. Color and pattern swatches as well as photographs of installations illustrate a 16-page booklet describing vinyl, asphalt and cork tile flooring and plastic wall tile. *Mastic Tile Corp. of America, Joliet, Ill.**

Protective Coatings. A 19-page report on comparative properties of protective coatings contains information on 14 types of coatings to protect equipment, walls, beams and ceilings in plants where fumes and industrial atmospheres cause corrosion, and includes physical and chemical data. *The Atlas Mineral Products Co., Mertztown, Pa.*

Sun Control Glass. Lo-tran 12.5, developed to meet the "brightness balance" recommendations of the National Council on Schoolhouse Construction, is described in an 8-page booklet which includes illustrations and a brightness survey. *The Houze Glass Corp., Port Marion, Pa.*

Concrete Reinforcing Steel Bars. The first section of this 64-page design manual summarizes the development, typical applications, advantages and properties of *Webrib* concrete reinforcing steel bars; the remaining portion furnishes design data. *Copperweld Steel Co., Warren, Ohio.**

Roof Insulation Board. A 4-page catalog reports on the composition, physical characteristics and performance data of *Fesco Board* roof insulation. *F. E. Schundler & Co., Inc., 504 Railroad St., Joliet, Ill.*

Air Conditioning. The 1954 Architectural File Folder on Air Conditioning contains comprehensive reports on installations in specific types of buildings as well as a discussion of proper location of air conditioning equipment. *Du Pont Co. (F. R. Zumbro), 6529 Nemours Bldg., Wilmington, Del.*

Cabinet Construction Data is a 20-page booklet which includes detail drawings and photographs of custom designed cabinets and casework. *Architectural Woodwork Institute, 332 S. Michigan Ave., Chicago 4.*

Pressure-treated Lumber. Uses in light and heavy construction of pressure-treated lumber are detailed in non-technical terms in a 16-page brochure from the *Wolman Preservation Dept. of Koppers Co., Inc., 1301 Koppers Bldg., Pittsburgh 19, Pa.*

School Sound Systems. An 8-page booklet illustrates and describes in non-technical terms how schools can utilize sound to achieve educational and administrative efficiency. *Form 3R2495, Engineering Products Div., Radio Corp. of America, Camden, N. J.**

School Furniture. Mobile school furniture including chairs, student desks, tables and teachers desks, are described and illustrated in color in a 24-page booklet. Material specification sheets are included. *Shwayder Bros., Inc., 4270 High St., Detroit 29, Mich.*

School Lighting. "Communication, Learning and Lighting in the Classroom" presents a report on classroom environment and facts about "Photo-Metric" broad-area lighting development and its applications. 40 pp. *The Wakefield Co., Vermilion, Ohio.*

Moving Rubber Sidewalks. Comments on the capacity of moving sidewalks, crowd behavior, points to consider in choosing between a roller bed and a slider bed, and the general application and utility of this transportation medium are included in a 4-page folder illustrated with longitudinal and cross-section drawings. *Folder 2567, Link-Belt Co., Dept. PR, 307 N. Michigan Ave., Chicago, Ill.*

School Electrical Facilities. A 31-page booklet discusses lighting and electrical facilities for schools and includes photographs and sketches of actual installations of systems available. *B-6521, Westinghouse Electric Corp., P. O. Box 2099, Pittsburgh 30, Pa.**

Outdoor Lighting. A 28-page brochure illustrates uses for outdoor lighting around the home and describes types of fixtures and wiring for various functions. *Lamp Div. General Electric Co., Nela Park, Cleveland 12, Ohio.**

Air Conditioning Units. A 20-page catalog describes three types of air conditioning units for industrial and commercial applications and is illustrated with photographs, line drawings and size specification tables. *American Blower Corp., Detroit 32, Mich.**

Ceramic Tile. "Tile for Schools and Hospitals," a 24-page booklet, includes color photographs of tile installations in kitchens, dining areas, washrooms and entrance corridors and gives complete tile descriptions for all installations shown. *American-Olean Tile Co., 1000 Cannon Ave., Lansdale, Pa.**

Magnetic Amplifier Dimmers. A 10-page brochure illustrated with photographs and detail drawings describes self-saturating magnetic amplifier dimmers for controlled lighting. *Vickers Electric Div., 1815 Locust St., St. Louis 3, Mo.*

Concrete Water Repellents. An 8-page brochure contains detailed specifications and information on the use of Medusa concrete water repellents. *Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland 15, Ohio.**

** Other product information in Sweet's Architectural File, 1955.*

(Continued on page 316)

THE PEELLE SAFETY SEAL ASTRAGAL



Cross section at the meeting rail of the Peelle Freight Elevator Door showing the Peelle Safety Seal Astragal—a flexible tube of neoprene and asbestos. This eliminates the dangerous shear hazard of an overlapping steel astragal.

PREVENTS SHEARING ACCIDENTS ON FREIGHT ELEVATOR DOORS



Patented tension dual side latching arrangements provide positive and parallel safety locking of upper and lower door panels. Elimination of shear hazard, due to center latch, is also accomplished. Patent #2,659,457.

Here is the greatest safety advance in freight elevator doors since the introduction of the electric interlock. The Peelle Safety Seal Astragal completely eliminates the danger of sheared fingers by an overlapping steel astragal which, until recently, was necessary on all bi-parting freight elevator doors bearing the Underwriters' Laboratories label. Now both Underwriters' Laboratories and Factory Mutual Laboratories have approved the use of the Peelle Safety Seal Astragal on Peelle Doors with 1½ hour rating.

Peelle Freight Elevator Doors, equipped with Peelle Safety Seal Astragals, are now being used by Eastman Kodak Company, Aluminum Company of America, United States Rubber Company, American Cyanimid Company, Goodrich Tire & Rubber Company, General Analine & Film Company, the Consolidated Edison Company and many others.

Peelle Safety Seal Astragals may be installed on Peelle Freight Elevator Doors now in use and can also be applied to any other Peelle Bi-Parting Horizontal or Vertical Sliding Doors.

Write for details.

MOTORIZED DOORS SPEED UP ELEVATOR SERVICE

THE PEELLE COMPANY • 47 Stewart Avenue, Brooklyn 37, N. Y.

Offices in Principal Cities

PEELLE MOTORSTAIRS • INDUSTRIAL DOORS • FREIGHT ELEVATOR DOORS • DUMBWAITER DOORS


CURTIS ALZAK
ALUMINUM TROFFERS
Low Brightness Lighting
High Efficiency Bookkeeping
REPUBLIC NATIONAL BANK
DALLAS, TEXAS
CURTIS
LIGHTING, INC.
TO TURN NIGHT INTO DAY, AMERICA'S NEWEST BANK CHOSE AMERICA'S FINEST LIGHTING
In the Check Processing and Bookkeeping Department of the Republic National Bank, where more than 255,000 checks are handled day and night, members of the department's staff enjoy an abundance of high quality, low brightness, glare-free illumination. To provide the finest "Eye-Comfort" lighting for this exacting task, Curtis Alzak Aluminum single lamp recessed troffers were selected. The combination of Curtis design, Alzak Aluminum reflectors processed after forming and low-brightness fluorescent lamps work together to continuously maintain ideal light conditions comparable to diffused daylight.
For further details of this and other Curtis lighted areas throughout the Republic Bank fill in below.
NAME
ADDRESS
CITY
STATE
DEPT. J-3-RB
CURTIS Lighting, Inc.
6135 West 65th Street
Chicago 38, Illinois
IN CANADA
CURTIS Lighting of Canada, Ltd.
195 Wickstead Avenue
Toronto 17, Canada

TIME-SAVER STANDARDS

AE

ENGINEERED WOOD DESIGN—10: LAPPED JOISTS

By Mel A. Barkan and William J. LeMessurier

The principle of continuity in framing is often employed in large buildings to reduce the required size of members. It is used less in small structures such as houses, but recent tests have shown that when the principle is applied to roof joists, making them continuous over two spans, framing lumber can be reduced as much as 20 per cent. In this case deflection is reduced to the point where shear and bending stresses govern design. Such an approach, however, has the disadvantage that the length of a fully continuous joist must be equal to twice the length of a simple span. Frequently this member is difficult to procure and costs more.

A desirable solution, then, would be a design which combines reduction in deflection resulting from continuous action with the shorter length of the simple span joist. This can be accomplished by lapping and connecting two members over the interior support as shown in Fig. 1. Since the beams are connected at C and E (Fig. 2) the following is true: the deflections at points C and E on Beam 1 must be equal respectively to the deflections at points C and E on Beam 2. Mathematically this leads to the forces shown in Fig. 2. The forces P_1 and P_2 exerted at the connections tend to reduce the maximum deflections which occur in a

Fig. 1

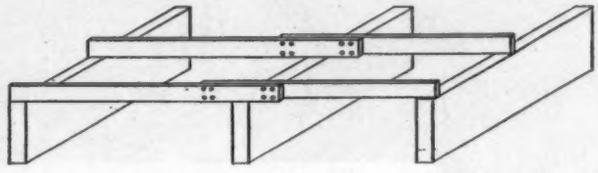
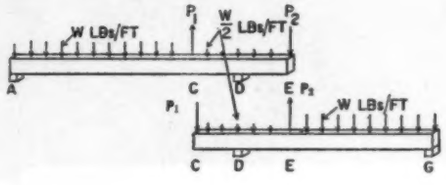


Fig. 2



LAPPED JOIST TABLES: Roofs, 20 lb/sq ft live load

Dead load: 15 lb/sq ft (including plaster ceiling)
Spacing of joists: 24 in. center to center

Key to tables:

$$k = \frac{\text{short span}}{\text{long span}}$$

$$a = \frac{\text{distance from interior support to center of lap construction}}{\text{long span}}$$

P = joint force (lb)
L = length of longer span (ft-in.)

1. Design Conditions
Fiber stress 1200 lb/sq in.
Shear 95 lb/sq in.
Mod. of elasticity 1,200,000

Woods Meeting Design Conditions
Cypress, 1300f grade
Redwood, Heart Structural
Spruce, Eastern, 1200f Structural Grade

	k = 0.5 a = 0.09		k = 0.6 a = 0.09		k = 0.7 a = 0.09		k = 0.8 a = 0.10		k = 0.9 a = 0.11		k = 1.0 a = 0.12	
	P	L	P	L	P	L	P	L	P	L	P	L
2x4	278	6–10	282	6–10	289	6–11	280	7–1	283	7–4	295	7–8
2x6	432	10–7	437	10–7	446	10–8	432	10–11	437	11–4	455	11–10
2x8	575	14–1	582	14–1	596	14–3	578	14–7	585	15–2	609	15–10
2x10	731	17–11	740	17–11	756	18–1	736	18–7	739	19–2	772	20–1
2x12	884	21–8	895	21–8	916	21–11	888	22–5	897	23–3	936	24–4

2. Design Conditions
Fiber stress 1450 lb/sq in.
Shear 120 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1450f No. 1
Pine Southern, No. 1

	k = 0.5 a = 0.08		k = 0.6 a = 0.08		k = 0.7 a = 0.08		k = 0.8 a = 0.08		k = 0.9 a = 0.09		k = 1.0 a = 0.09	
2x4	342	7–6	346	7–6	355	7–7	381	7–9	376	8–0	427	8–4
2x6	531	11–8	538	11–8	550	11–9	590	12–0	584	12–5	662	12–11
2x8	706	15–6	715	15–6	733	15–8	787	16–0	776	16–6	884	17–3
2x10	896	19–8	907	19–8	932	19–11	996	20–3	984	20–11	1120	21–10
2x12	1090	23–10	1100	23–10	1130	24–1	1210	24–7	1190	25–4	1350	26–5

3. Design Conditions
Fiber stress 1100 lb/sq in.
Shear 145 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1100f No. 2

	k = 0.5 a = 0.07		k = 0.6 a = 0.07		k = 0.7 a = 0.07		k = 0.8 a = 0.08		k = 0.9 a = 0.09		k = 1.0 a = 0.12	
2x4	383	7–5	388	7–6	403	7–7	381	7–9	376	8–0	320	8–4
2x6	593	11–6	599	11–7	625	11–9	590	12–0	584	12–5	497	12–11
2x8	791	15–4	802	15–6	833	15–8	788	16–0	776	16–6	663	17–3
2x10	1000	19–5	1020	19–8	1060	19–10	996	20–3	984	20–11	840	21–10
2x12	1210	23–6	1230	23–9	1280	24–0	1210	24–7	1190	25–4	1020	26–5



Take a tip from the guy who knows:

Elementary School Gymnasium, Perrysburg, Ohio
Architects: Britch & Munger, Toledo, Ohio

FOR SCHOOL FLOORS

THAT LAST A LIFETIME,

Specify **KREOLITE!**

For nearly 50 years, Kreolite Wood Block Floors have been used successfully in industrial plant areas where heavy traffic would ruin normal floors.

Now, Kreolite offers this famous durability in its beautiful Flexible Strip End Grain Wood Block Flooring, designed specifically for school activities centers like gymnasiums, vocational shops and laboratories.

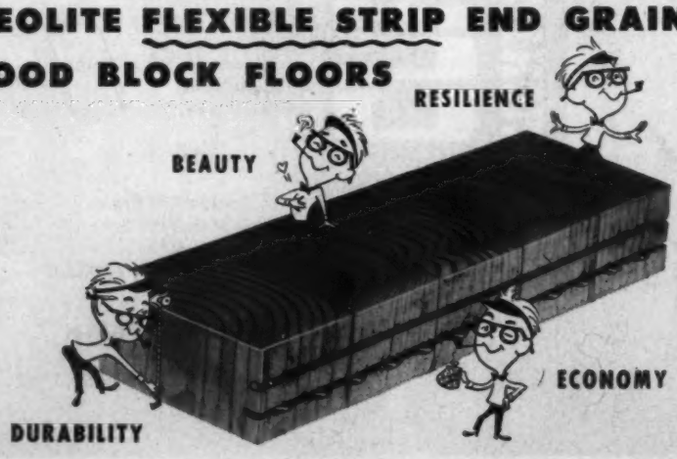
Made from 1-1/2" or 2" thick kiln-dried southern yellow pine, individual blocks of Kreolite are wire-trussed together to form compact monolithic-like end grain planks or strips. These strips are then impregnated with a special preservative to guard them against the ravages of time.

When the flooring is laid, each Kreolite strip is interlocked to adjoining strips by a patented steel wire spline—providing a smooth, resilient floor that defies hard usage! For complete details, fill out the coupon below.

The Jennison-Wright Corp.

2463 Broadway
Toledo 9, Ohio

KREOLITE FLEXIBLE STRIP END GRAIN WOOD BLOCK FLOORS



AR

Please send me a free sample and complete specifications of Kreolite Flexible Strip End Grain Wood Block Flooring.

Name_____

Address_____

City_____ State_____

ENGINEERED WOOD DESIGN—11: LAPPED JOISTS

By Mel A. Barkan and William J. LeMessurier

simple span making possible smaller members.

The saving which may be achieved by lapping and connecting two simple span joists is illustrated below.

Required Span: 16 ft
Load per sq ft: 30 lb
Joist Lumber:
No. 1 Douglas Fir, Coast Region
Allowable fiber stress 1450 psi
Allowable shearing stress 120 psi
Mod. of elasticity 1,600,000 psi
Spacing between lapped joists: 24 in.
Maximum allowable deflection: L/360
Equal spans: k = 1.0

From the data given in Table 5, the required member is 2 x 8. Using the same depth of joist and quality of lumber, the spacing between joists must be 12 in. for a simple span. The saving which results from lapping the member is therefore in excess of 20 per cent.

Limitations

Although this technique is applicable to floor construction, the design data contained in the tables must be restricted to flat or pitched (in one direction) roof applications since these tables assume both spans are loaded simultaneously.

Example, Using Tables

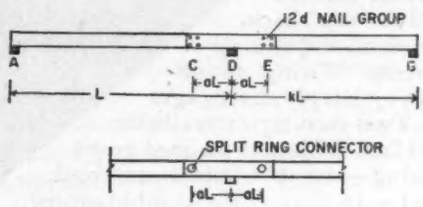
Given:

w = 30 lb/sq ft
f = 1100 lb/sq in.
L = 14 ft
s = 145 lb/sq in.
k = 0.8
E = 1,600,000 lb/sq in.

Find:

Size of member; joist force, P; lap ratio, a.

Fig. 3



LAPPED JOIST TABLES: Roofs, 30 lb/sq ft live load

Dead load: 15 lb/sq ft (including plaster ceiling)
Spacing of joists: 24 in. center to center

Key to tables:

$k = \frac{\text{short span}}{\text{long span}}$

$a = \frac{\text{distance from interior support to center of lap construction}}{\text{long span}}$

P = joint force (lb)
L = length of longer span (ft-in.)

4. Design Conditions
Fiber stress 1200 lb/sq in.
Shear 95 lb/sq in.
Mod. of elasticity 1,200,000

Woods Meeting Design Conditions
Cypress, 1300*f* grade
Redwood, Heart Structural
Spruce, Eastern, 1200*f* Structural Grade

	k=0.5 a=0.10		k=0.6 a=0.10		k=0.7 a=0.11		k=0.8 a=0.11		k=0.9 a=0.13		k=1.0 a=0.14	
	P	L	P	L	P	L	P	L	P	L	P	L
2x4	301	6–4	304	6–4	284	6–5	301	6–6	283	6–9	299	7–1
2x6	463	9–9	468	9–9	439	9–11	467	10–1	436	10–5	461	10–11
2x8	621	13–1	628	13–1	586	13–3	622	13–5	583	13–11	619	14–8
2x10	787	16–7	796	16–7	745	16–10	788	17–0	740	17–8	781	18–6
2x12	954	20–1	963	20–1	899	20–4	954	20–7	897	21–5	946	22–5

5. Design Conditions
Fiber stress 1450 lb/sq in.
Shear 120 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1450*f* No. 1
Pine Southern, No. 1

	k=0.5 a=0.09		k=0.6 a=0.09		k=0.7 a=0.09		k=0.8 a=0.10		k=0.9 a=0.11		k=1.0 a=0.13	
2x4	363	6–11	367	6–11	372	6–11	365	7–2	368	7–5	357	7–1
2x6	560	10–8	566	10–8	573	10–8	564	11–1	570	11–6	550	12–10
2x8	747	14–3	757	14–3	766	14–3	752	14–9	761	15–4	736	16–2
2x10	944	18–0	956	18–0	967	18–0	951	18–8	963	19–5	926	20–4
2x12	1150	21–10	1159	21–10	1180	21–10	1160	22–8	1170	23–7	1130	24–8

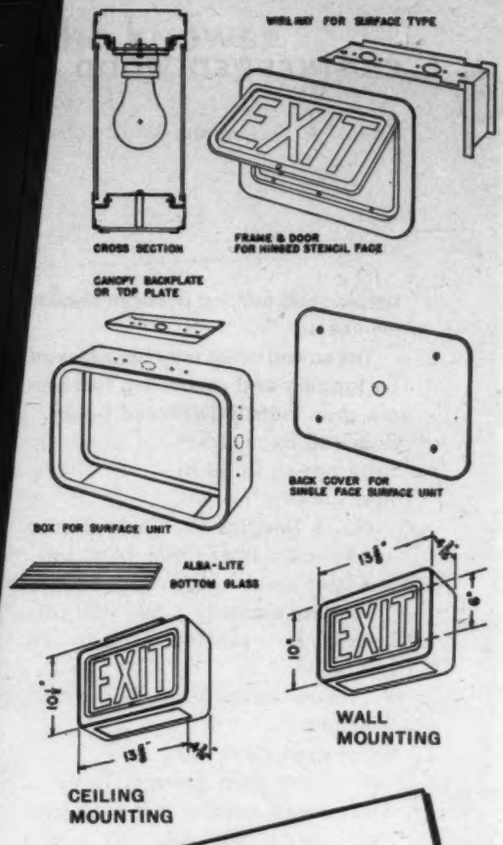
6. Design Conditions
Fiber stress 1100 lb/sq in.
Shear 145 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1100*f* No. 2

	k=0.5 a=0.10		k=0.6 a=0.10		k=0.7 a=0.11		k=0.8 a=0.11		k=0.9 a=0.13		k=1.0 a=0.14	
2x4	321	6–9	324	6–9	302	6–10	321	6–11	297	7–1	310	7–4
2x6	495	10–5	500	10–5	468	10–7	494	10–8	461	11–0	478	11–4
2x8	661	13–11	668	13–11	623	14–1	661	14–3	615	14–8	640	15–2
2x10	839	17–8	847	17–8	792	17–11	838	18–1	779	18–7	809	19–2
2x12	1020	21–5	1030	21–5	958	21–8	1020	21–11	939	22–5	981	23–3

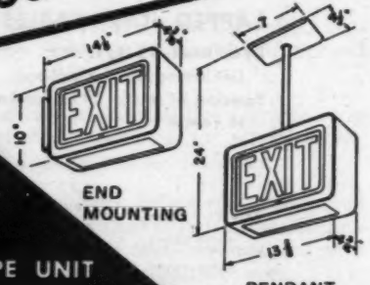


SURFACE TYPE UNIT
STENCIL FACE STYLE



Now it's possible to use one basic die-formed exit sign throughout an entire building. Quickly converted to single or double face use, The Perfeclite Surface Unit, is mounted from top, back, side, or from a pendant, depending on your requirements. Wiring is no problem. The wireway simply disengages through key slots. Two face styles available: hinged metal stencil face, 6" letters on fired green or red glass backing — or 6" letters on fired ceramic glass panel — in four color combinations.

ADAPTABLE — is the word for PERFECLITE'S new hinged exit unit



Specify Perfeclite Recessed Mounted Illuminated Exit Signs . . . die-formed, easy-to-install, easy-to-service. Two face styles: hinged metal stencil face, 6" letters on fired green or red glass backing, or 6" letters on fired ceramic glass panel — in four color combinations.

RECESSED TYPE UNIT
GLASS FACE STYLE



All signs are fired ceramic colors — unconditionally guaranteed. *Units are Underwriters Laboratories, Inc., approved, and comply with National Electrical Code.*

PERFECLITE PRODUCTS
THE MARK OF LIGHTING SERVICE

THE PERFECLITE COMPANY
1457 East 40th Street
Cleveland 3, Ohio

Please send me The Perfeclite Data Folder EX-55A.

NAME.....

ADDRESS.....

CITY. .....STATE.....

ENGINEERED WOOD DESIGN—12: LAPPED JOISTS

By Mel A. Barkan and William J. LeMessusier

Using Table 6 which meets the given conditions enter the column for k = 0.8. Move down this column until the allowable span listed is equal to or greater than the required span. Then move horizontally to the left to find that the required minimum member size is 2 x 8. The joint force of 661 lb may be found immediately to the left of the allowable span (14 ft-3 in.). The value of the lap ratio, a = 0.11, is tabulated directly beneath the value of k.

Joint Design

1. The allowable load per common wire nail is the lateral resistance of the nail when driven in the side grain (perpendicular to fibers) of seasoned wood. (Calculations based upon the *National Design Specification For Stress-Grade Lumber and Its Fastenings, 1953.*)

Table	Nail Size	Allow. Load, lb per nail
1, 4, 7	12d	57.75
2, 5, 8	12d	70.50
3, 6, 9	12d	70.50

To determine the minimum number of nails required, divide the force P listed in the tables by the allowable load in pounds per nail as listed above. For example, using No. 1 Douglas Fir, Coast Region, 1450f joists subjected to a joint load of 295 lb, the number of nails required is 295/70.5 = 4.18. Since the number of nails actually used must be equal to or greater than the number required use 5 nails.

2. The allowable load per split ring connector loaded perpendicular to the grain in seasoned wood. (Calculations also based upon the *National Design Specification.*)

Table	Joist Size	Ring Dia., in.	Allow. Load, lb.
1, 4, 7	2 x 4	2½	1572
	2 x 6	2½	1750
		4	2770
	2 x 8 and larger	2½	1750
		4	3330
2, 3, 5, 6, 8, 9	2 x 4	2½	1880
	2 x 6	2½	2110
		4	3330
	2 x 8 and larger	2½	2110
		4	4000

To allow adequate space for the connection add approximately 6 in. to the length L + aL.

WARNING: Each nail group or ring connector must be centered about a point which lies at least a distance equal to "aL" from the support. Otherwise, joint forces will be higher than those listed. Further, the ring connector should be centered halfway between the edges of the joist.

LAPPED JOIST TABLES: Roofs, 40 lb/sq ft live load

Dead load: 15 lb/sq ft (including plaster ceiling)
Spacing of joists: 24 in. center to center

Key to tables:

$$k = \frac{\text{short span}}{\text{long span}}$$

$$a = \frac{\text{distance from interior support to center of lap construction}}{\text{long span}}$$

P = joint force (lb)
L = length of longer span (ft-in.)

7. Design Conditions
Fiber stress 1200 lb/sq in.
Shear 95 lb/sq in.
Mod. of elasticity 1,200,000

Woods Meeting Design Conditions
Cypress, 1300f grade
Redwood, Heart Structural
Spruce, Eastern, 1200f Structural Grade

	k=0.5 a=0.12		k=0.6 a=0.12		k=0.7 a=0.12		k=0.8 a=0.13		k=0.9 a=0.14		k=1.0 a=0.16	
	P	L	P	L	P	L	P	L	P	L	P	L
2x4	289	5–11	291	5–11	298	6–0	292	6–1	300	6–4	298	6–8
2x6	447	9–2	451	9–2	459	9–3	451	9–5	466	9–10	462	10–4
2x8	597	12–3	602	12–3	616	12–5	603	12–7	621	13–1	615	13–9
2x10	765	15–6	762	15–6	777	15–8	763	15–11	787	16–7	779	17–5
2x12	914	18–9	922	18–9	943	19–0	923	19–3	953	20–1	944	21–1

8. Design Conditions
Fiber stress 1450 lb/sq in.
Shear 120 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1450f No. 1
Pine Southern, No. 1

	k=0.5 a=0.10		k=0.6 a=0.10		k=0.7 a=0.10		k=0.8 a=0.11		k=0.9 a=0.12		k=1.0 a=0.14	
2x4	377	6–6	381	6–6	391	6–7	378	6–8	389	7–0	378	7–4
2x6	585	10–1	591	10–1	603	10–2	585	10–4	602	10–10	585	11–4
2x8	784	13–6	792	13–6	811	13–8	784	13–10	801	14–5	782	15–2
2x10	992	17–1	1000	17–1	1020	17–3	991	17–6	1020	18–3	989	19–2
2x12	1200	20–8	1210	20–8	1240	20–11	1200	21–2	1230	22–1	1200	23–3

9. Design Conditions
Fiber stress 1100 lb/sq in.
Shear 145 lb/sq in.
Mod. of elasticity 1,600,000

Woods Meeting Design Conditions
Douglas Fir, Coast Region, 1100f No. 2

	k=0.5 a=0.09		k=0.6 a=0.09		k=0.7 a=0.10		k=0.8 a=0.10		k=0.9 a=0.11		k=1.0 a=0.13	
2x4	390	6–1	395	6–1	366	6–2	389	6–3	389	6–5	367	6–7
2x6	604	9–5	611	9–5	568	9–7	602	9–8	601	9–11	566	10–2
2x8	807	12–7	817	12–7	756	12–9	804	12–11	803	13–3	756	13–7
2x10	1020	15–11	1030	15–11	959	16–2	1020	16–4	1020	16–10	960	17–3
2x12	1240	19–3	1250	19–3	1160	19–6	1230	19–8	1230	20–4	1160	20–10



Prominent architects feature Bigelow



For more than half a century, the New York architectural firm of Eugene Schoen & Sons, now Schoen & Hennessy, has been successfully designing structures for over 2800 clients throughout the country. And in each plan, special attention has been devoted to creating a pleasant and attractive atmosphere for the interiors.

The expanse of beautiful Bigelow Hartford-Saxony® carpet, shown here, demonstrates the effectiveness of following this principle. The carpet, chosen for the

Mr. Lee Schoen, member of the architectural firm of Schoen & Hennessy, New York. The firm has most recently designed the Air France Building in New York; the New York Thruway Restaurants for Union News Co.; the San Juan Hotel in Orlando, Florida; and the new Health Center for the Amalgamated Laundry Workers, New York, shown here.



Bigelow Hartford-Saxony Carpet in the offices of the Health Center for the Amalgamated Laundry Workers, New York. Installed by L. Jones & Co., Inc. of New York.

carpet in new health center

offices of the Health Center for the Amalgamated Laundry Workers in New York, carries out the architects' idea for suiting environment to the personality and needs of the people who occupy the space.

Says Mr. Lee Schoen, member of this nationally known architectural firm:

"We have always found it worth while to consult the Bigelow specialists when our job is in the planning stage. They understand our ideas and give intelligent aid in developing color schemes and patterns.

"What's more, experience has shown that Bigelow carpet is tough, uniformly constructed, and beautiful. It's always a satisfaction to us and to the owner."

Planning a carpet installation? You'll find it worth your while to consult Bigelow's Carpet Counsel as early as possible. One of Bigelow's trained specialists will help you select ideally suited carpet—at a price to fit your project budget. The service is free.

Simply write to one of the sales offices, listed below, for information or carpet samples.

SINCE 1825
BIGELOW
Rugs—Carpets

Bigelow... Number 1 name in Carpets

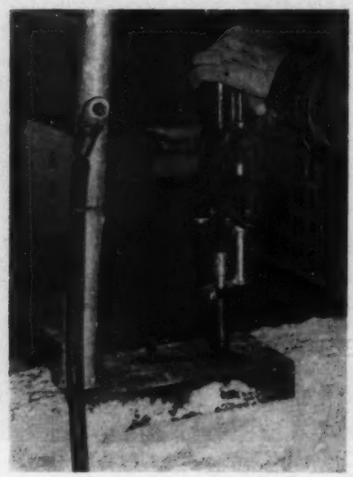
see our catalog in
S
ARCHITECTURAL FILE
12L
Bi
or write for copy

Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Tex.; Denver, Col.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Kansas City, Mo.; Los Angeles, Calif.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; San Francisco, Calif.; Seattle, Wash.

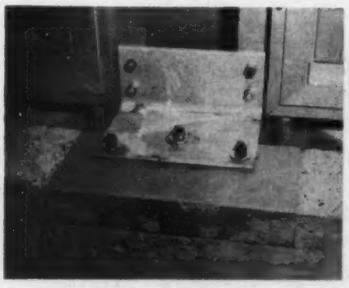
AE ROUNDUP

(*Continued from page 237*)

The Equitable Life Assurance Building, San Francisco's newest skyscraper, utilizes specially designed, preassembled aluminum window-wall panels which were fastened — for speed, accuracy and economy — to angle clips held in place by end-welded threaded studs. Since the aluminum facing covering the horizontal concrete members of the building below the windows was an integral part of the panels, they had to be fastened very precisely in respect to the face of the building and the units above and below.



Threaded studs were end welded to angle clips for accurate installation of aluminum window-wall panels



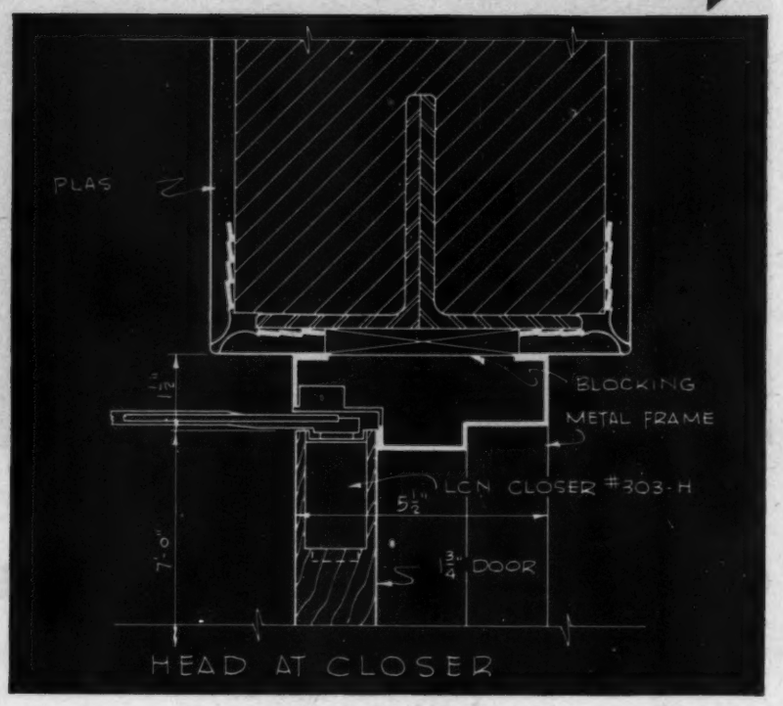
As shown in the first picture, threaded studs, ⅜ by 1¼ in., were end-welded to steel inserts which were cast in the concrete poured around the structural spandrels. To the studs were fastened angle clips, as shown in the second picture, which in turn hold the aluminum window-wall panels. A similar angle clip, with two studs, was used at the top of the windows.

Architects for the building were Loubet and Glynn, San Francisco, with Irwin Clavin, New York, Associate.

Gravity Warm-air Heating of Basementless Houses has been studied in a test bungalow by the National Bureau of Standards in Washington under the sponsorship of the FHA. The purpose was to determine the temperature distribution produced by a typical gas-fired wall heater using either gravity circulation of the air or a small booster fan. The results revealed (1) that the heat loss of the structure was not significantly greater than for other similar heating methods where the heating unit is entirely enclosed in the heated space and (2) that ceiling insulation is desirable to restrict heat loss upward and to promote radiation downward from the warm ceiling surface.

Porcelain Enamels are being studied in an expanded weathering test program under the sponsorship of the Porcelain Enamel Institute. During the tests many different specimens are tested and inspected at regularly scheduled intervals in various geographical locations to study the effects of different climatic and atmospheric conditions on the porcelain coating.

(*Continued on page 254*)



CONSTRUCTION DETAILS

for LCN Closer Concealed-in-Door Shown on Opposite Page

The LCN Series 302-303 Closer's Main Points:

1. An ideal closer for many interior wood doors
2. Mechanism concealed within door; flat arm not prominent, and provides high closing power
3. Door is hung on regular butts
4. Closer is simple to install and to adjust
5. Used with wood doors; wood or metal frames
6. Practically concealed control at little more than exposed closer cost

Complete Catalog on Request—No Obligation
or See Sweet's 1955, Sec. 17e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS



Skidmore, Owings & Merrill, *Architects and Engineers*

MODERN DOOR CONTROL BY *LCN* · CLOSERS CONCEALED IN DOOR

NEW PLANT OF SAWYER BISCUIT COMPANY DIVISION OF
UNITED BISCUIT COMPANY OF AMERICA, MELROSE PARK, ILLINOIS
LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page



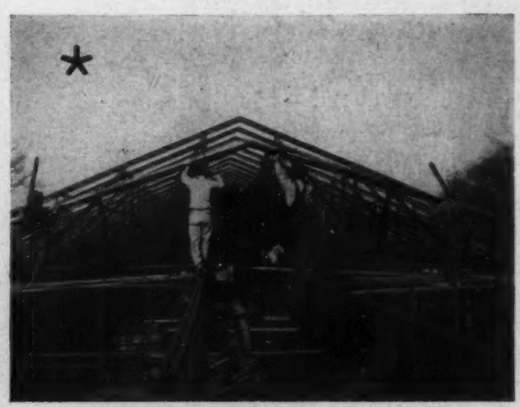
How* to get highest quality at reasonable cost in light institutional construction

Penmetal LIGHTSTEEL structural sections are the answer.

These steel sections are scientifically designed for maximum economy strength-to-weight ratio. No longer must you pay for load carrying capacity which you don't need. Yet LIGHTSTEEL sections carry all the benefits of conventional steel framing, and then some. Example: Precisely engineered openings in the sections which simplify through-frame installation of wiring and plumbing.

You save on erection, too. Joists, studs, track and bridging are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of the light weight of the sections complete wall panels and roof trusses can be readily trucked to the job site and erected in a few hours.

Send for catalog SS-6, which gives complete specifications, engineering data and safe loads for all stud and joist sections.



Penmetal

PENN METAL COMPANY, INC.

General Sales Office:
205 East 42nd Street, New York 17, New York
Plant:
Parkersburg, W. Va.

PM-77

NEW

high in style . . .
low in cost

BRUCE *Fireside* PLANK FLOOR



Bruce Fireside Plank Floor gives homes extra floor appeal at no extra cost. Mail coupon for free literature.

Featuring the exciting new Midnight Finish

Here's America's newest, smartest hardwood floor . . . praised by architects and builders and selected for several nationally-publicized homes. This low-cost Bruce Fireside Plank has all the well-known advantages of solid oak plus these distinctive features:

Stylish dark finish, alternate widths

The dark, mellow finish is smart, different. It's factory-applied for long life and easy care. Alternating 2¼" and 3¼" strips with wide, shallow side bevels give Bruce Fireside Plank the charm of an expensive random-width floor and an interesting pattern effect.

Low installed cost

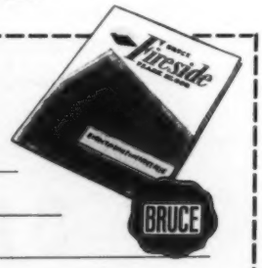
Because it's completely finished at the factory, Bruce Fireside Plank costs no more installed than a comparable grade of plain strip flooring. There are no on-the-job sanding and finishing costs, and builders save from three to five days' working time per house.

MAIL FOR FREE BOOKLET

E. L. Bruce Co.
1690 Thomas St., Memphis 1, Tenn.

Send to_____

Address_____



BRUCE

E. L. BRUCE CO., Memphis 1, Tenn.
world's largest maker of hardwood floors



Years of service. Long, trouble-free life is assured by K&M Corrugated Asbestos Sheets. They are used on the roof and sides of this building at the Osgood Company, Marion, Ohio. Application Contractor: Elwin G. Smith Co., Toledo, Ohio.

Your clients get low maintenance costs with K & M Corrugated Asbestos Roofing & Siding

When K&M Corrugated Asbestos Sheets go up, upkeep expenses stay down. They never need protective painting, require little or no maintenance.

Really rugged. These sheets are strong, dense, and tough. Made of asbestos fiber and portland cement, they won't burn, rot, or corrode. And they're highly resistant to extremes in weather.

Big savings. These corrugated sheets make possible low application costs—they need only a minimum of cutting or fitting. And they offer the extra money-saving feature of needing little or no upkeep.

For your reference, details on K&M Corrugated Asbestos Sheets are available in Sweet's Architectural Files. For further information, write directly to us. We'll be glad to assist in every way possible.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

K&M best in asbestos ®



Miss Foster hates to lose her connections

Moving can be a hardship on employees if electrical outlets are not conveniently located.

Electrical availability for dictating machines, telephones, intercoms, and other electrically operated equipment can be quite a problem when office space is relocated. Whether you plan or build offices for your own use or for rental, it's good business to plan to have enough electrical outlets to provide for efficient space utilization — without costly replacement work and unsightly makeshifts. The answer to electrical flexibility is General Electric Q-Floor wiring, the system that makes every square foot of floor space available for outlets.

The General Electric Q-Floor wiring system is designed for installation with cellular steel subflooring. Every cell is a raceway for present and future circuit requirements. No costly alterations, no litter, no tie-up of space, no matter how often or how much your electrical requirements change. You simply drill a hole in the floor and pull wires to connect an outlet. Installations in the Celanese Office Building in Charlotte, N. C., in institutions like Central Power and Light Company's Service Center in Corpus Christi, Texas, and commercial buildings like the ultramodern Prudential Insurance Company Building in Chicago are proving that Q-Floor wiring gives the modern office complete electrical flexibility.

For more information on General Electric Q-Floor wiring systems, call your G-E Construction Materials district office or write to Section C51-95, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

Progress Is Our Most Important Product

GENERAL ELECTRIC

The right type lock line for every type of service

First Choice

for the new
Tower Building
Denver, Colorado



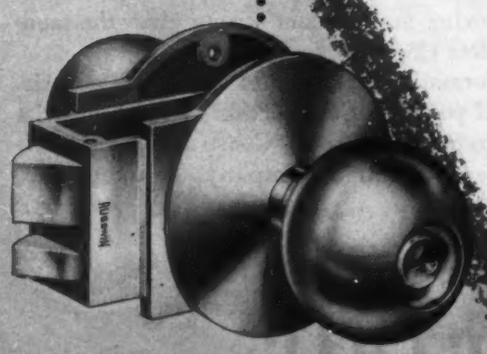
RUSSWIN®

"Unilocs"

Architects:
Webb & Knapp
Architectural Div.
Assoc. Architects:
Kahn & Jacobs, N. Y.
G. M. Mutick, Denver
Hardware Supplier:
George Mayer
Hardware Company

For the imposing new Tower Building at the famous MILE HIGH CENTER DEVELOPMENT, Russwin "Unilocs" offered advantages quite similar to those of the unique Russwin Heavy Duty Unit Locks. They're pre-assembled at the factory. Each lock is built on a cast brass frame and has a cast bronze latch bolt, forged brass knob shanks and anti-friction latches. Two entrance door locksets may be obtained with ¾" bolt throws — others have ⅝" throws.

With all basic types of locks available in one line, selection of the right type for the service is simplified for those who specify RUSSWIN. For complete details on "Unilocs," write Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.



'Unilec, Mono Design.
Other Russwin Hardware installed includes: Door Stops, Surface Door Closers, Overhead Door Holders, Kick Plates, Door Pulls, Push Plates, Fire Exit Bolt.

AE ROUNDUP

(Continued from page 248)

Lift-slab Construction, which, according to a statement on page 190 of the April AR, "has never before been attempted in low-cost house construction," *was attempted,* it appears, in 1952. The method used was not the well-known Youtz-Slick method, in which hydraulic jacks are used, but was instead a combination of chains and pulleys by which the concrete slab was raised manually, as shown in the picture below.



The slab-lifting technique by means of hydraulic jacks is quite familiar by now, but here is a house roof being hoisted by chains and pulleys

The house, now occupied, was designed by A. Epstein and Sons, Inc., of Chicago, as a pilot house for future mass production for Herbert S. Greenwald. The 25- by 40-ft house is built around a central core containing mechanical and structural elements, including the four precast concrete columns which support the slab roof. A 2⅔-ft roof overhang provides adequate shade from the direct rays of the summer sun through the all-glass south wall.

Although no additional houses of this design have been constructed yet, the designers are still devising schemes for mass housing utilizing this system.

Cavity Wall Construction is growing — upwards, that is. In the recently completed Veterans Administration Hospital in New York City it was used to what is claimed to be the record height of 19 stories. In the Cabrini Extension of low-rent public housing on the near North Side of Chicago it will be used in one building of the same height, 19

stories, and other buildings not so tall.

In the VA Hospital the inner wythe (wythes are the two vertical planes, separated by a 2-in. air space, which comprise the cavity wall), of 4- to 6-in. blocks, is the load-bearing portion of the wall. Constructed of center concrete units, it rests directly on the lightweight concrete floor. The outer wythe of brick is 4 in. thick, supported by 5- by 5- by $\frac{1}{16}$-in. angles attached to spandrel beams 11 ft 8 in. apart vertically. The two wythes are tied together only by bronze Z-anchors $\frac{1}{4}$ in. in diameter spaced 16 in. apart vertically and 24 in. horizontally, staggered. The anchors are crimped to prevent any transmission of moisture between the wythes. The window jambs are moisture-proofed with continuous caulking strips and drips which deposit water in the cavity, which in turn is drained by staggered weepholes in the outer wythe just above the shelf angles and grade-level supports. There is continuous flashing in the cavity at grade level to drain the water to weepholes and avoid any seepage into the building or foundations. LaPierre, Litchfield & Partners were architects on the project; Severud-Elstad-Krueger, consulting structural engineer; Guy B. Panero, consulting mechanical engineer.

The first section of the Cabrini Extension consists of one 19-story building, two 10-story houses and five of 7 stories. The second section of seven buildings will get underway this fall. The outer wythe will be of face brick and will leave the concrete columns and spandrel beams exposed. A. Epstein & Sons, Chicago, were architects of the low-rent apartments sponsored by the Chicago Housing Authority. Contractor is Corbetta Construction Co.

Factory Design and Decor can help boost factory production, according to a speech by I. Matelsky of G.E. before the semi-annual meeting of the A.S.M.E. Industrial health control, he maintained, should be considered in the blueprint stage by the architect, the plant layout men and the designers of machine tools and equipment. Noise, illumination, heating and air conditioning and decor are some of the factors which are important in attaining greater accuracy in workmanship, improved morale, better sanitary maintenance, greater safety and so increased production.

(*Continued on page 258*)

The right type lock line for every type of service

First Choice

for the new
Denver Club Building
Denver, Colorado



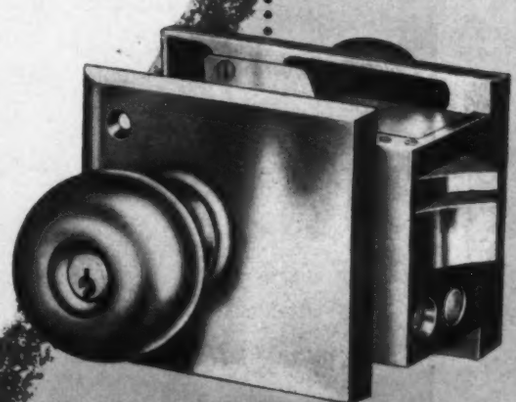
RUSSWIN®

Unit Locks

Architect:
R. H. Erwin, A.I.A.

Hardware Supplier:
George Mayer
Hardware Company

Finishing hardware specifications for the magnificent new Denver Club Building called for the unique advantages of Russwin Unit Locks. These locks, for example, are completely assembled at the factory. No disassembly is required to install or remove them. Latches are anti-friction, pullman type, assuring positive latching with minimum effort. Lock frames are solid bronze metal castings designed to maintain permanent alignment of parts. Such features PLUS a choice of styling and finishes met the exacting specifications established for the Denver Club Building and assured the right type lock for the service.
Russell & Erwin Division,
The American Hardware Corporation, New Britain, Connecticut.



Cast Aluminum Unit Locks, Modera Design.
Other Russwin Hardware installed includes: Surface Door Closers, Stilemaker Locks, Ten Strike Locks, Kick Plates, Push Plates, Door Pulls, and Miscellaneous Trim Hardware.

CRANE RADIANT BASEBOARD



"It's almost invisible!" Most clients are surprised when they look at an interior elevation you've drawn and discover how little space Crane Radiant Baseboard takes.



Best answer to the question almost every client asks about heating

When a client asks you, "What's the best *kind* of heating?" and you frankly reply "hot water," chances are you're putting a picture in his mind of unsightly radiators that clutter up wall space and interfere with furniture—or heating systems "buried" in floors or ceilings where they're impossible to get at.

So, next time the question comes up, perhaps you should qualify your answer with Crane Radiant Baseboard.

Your client can see how inconspicuous it is—that it takes up virtually no space in a room. And you can mention that Crane Radiant Baseboard provides heat by a combination of radiation and convection in almost the exact ratio that the human body loses heat—so it provides the maximum possible comfort. Never any drafts. Never any hot spots. Warmth is constant all over the room.

Hot water heating with Crane Radiant Baseboard increases the VALUE of *any building* or home.

Crane Radiant Baseboard is easy to install, easy to service . . . yet practically invisible. Your Crane representative can give you the details you'll need.

And your client will be happy you thought of it.

COMPLETE THE HEATING TEAM WITH NEW CRANE SUNNYDAY CAST IRON BOILER

Crane Sunnyday Boilers are perfect companions for Crane Radiant Baseboard. Save up to 15% on residential fuel bills. Available with built-in Crane tankless water heaters that will save your client $50 to $150 on the cost of a separate water heater.

CRANE



In this exclusive club, Crane Radiant Baseboard permits the use of a wide expanse of glass without creating uncomfortable drafts or "chills spots." Doesn't interfere with drapes or placement of furniture.



In modern offices, Crane Radiant Baseboard provides smooth, even warmth that doesn't vary more than a degree or two anywhere in the room.



In modern homes, Crane Radiant Baseboard blends with home decor, provides finest kind of heat possible. May be installed at ceiling level in kitchens, and painted as desired.



Type RC Baseboard



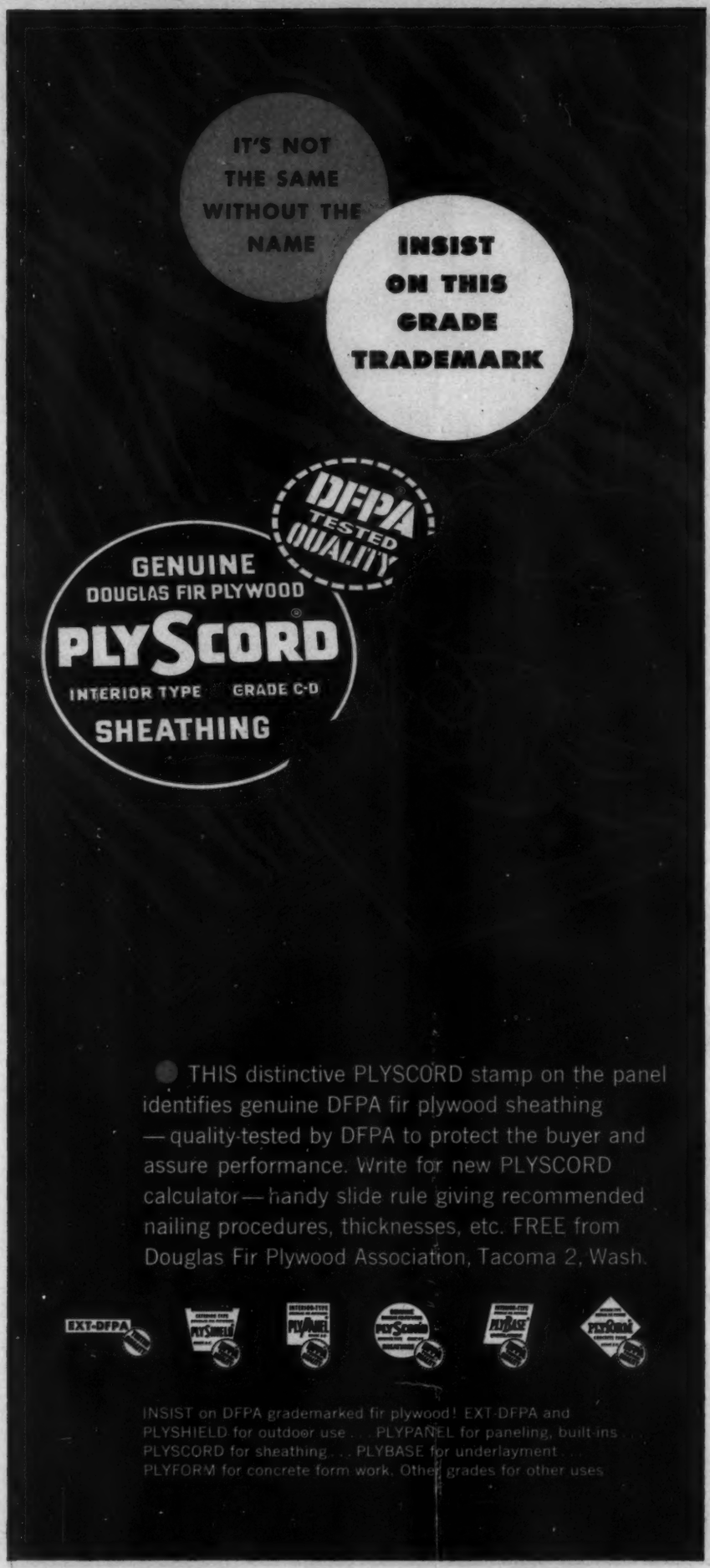
Type R Baseboard



Type F Copper Tube Baseboard

CRANE CO.
General Offices: 836 S. Michigan Ave., Chicago 5, Ill.
VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

CRANE STARTS ITS SECOND CENTURY OF QUALITY
Founded July 4, 1855



AE ROUNDUP

(*Continued from page 254*)

Moisture Condensation in Building Walls discusses the conditions under which moisture condensation will occur in insulated walls. Data relative to certain types of wall have been collected so that estimates can be made concerning the probability of moisture condensation in walls of dwellings if the factors governing such condensation, including design, structural materials, construction details and moisture conditions outside and inside the building are known. This National Bureau of Standards Report BMS63, by Harold W. Woolley, is available, at 15¢, from the Superintendent of Documents, Washington 25, D. C.

Compilation of ASTM Standards in Building Codes brings together more than 250 ASTM specifications, methods of test and definitions of materials included by reference in the major building codes of the United States and Canada. This 973-page first edition is available at $6.00 per copy from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

Design in Hardwoods awards for highest honors in the 1955 Hardwoods Exhibit in Chicago went to Charles U. Deaton, Kirkwood, Mo., and Paul W. McCobb, New York City, in the production furniture division; W. C. Muchow, Boulder, Col., in the custom furniture division; Harper Richards and Henry P. Glass, Chicago, for architectural interiors; and Rolscreen Co., Pella, Iowa, in the general products division. The purpose of the awards is to highlight the important role the designer plays in the creation of better products and to give recognition to well-designed hardwood furniture, products, architectural installations, art and craftware.

The Sliding Glass Door and Window Institute, a trade organization to service architects, builders, contractors, decorators and the public, has been formed on the West Coast. National headquarters are at 7421 Beverly Blvd., Los Angeles 36, Calif.

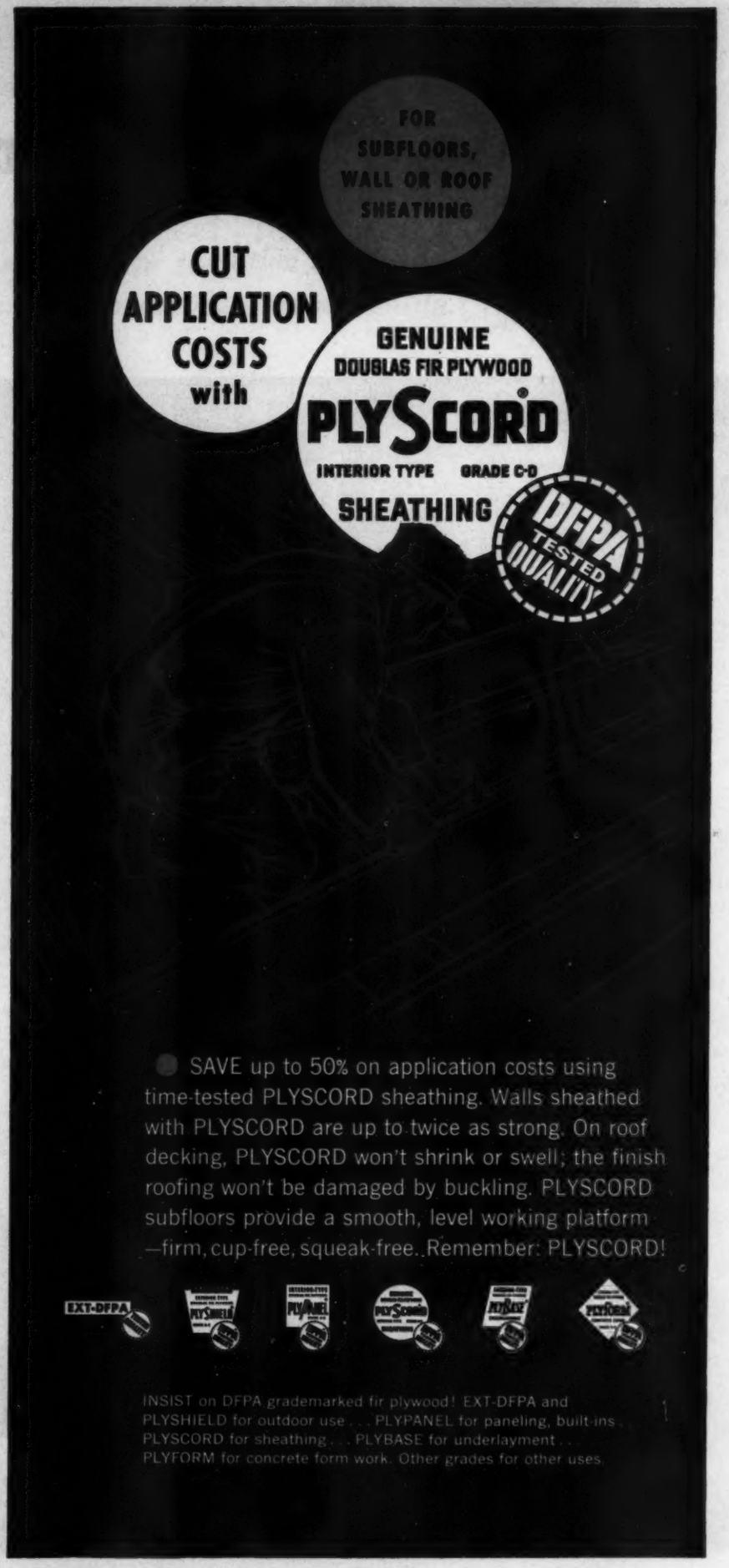
Brick in Construction in the United States increased in the first quarter of 1955 22 per cent over the same period in 1954, according to the Structural Clay Products Institute.

AE ROUNDUP

The Steel Door Institute has been formed by six producers of steel door and frame units for interior use to establish through the Commodity Standards Div., U. S. Dept. of Commerce, voluntary standards for the industry and to keep architects and builders informed of new developments in the field. The Institute is located at 2130 Keith Bldg., Cleveland, Ohio, and represents the following members: American Welding and Mfg. Co.; Diebold, Inc.; The Steelcraft Mfg. Co.; Republic Steel Corp. (Truscon Div.); United Steel Fabricators; Virginia Metal Products, Inc.

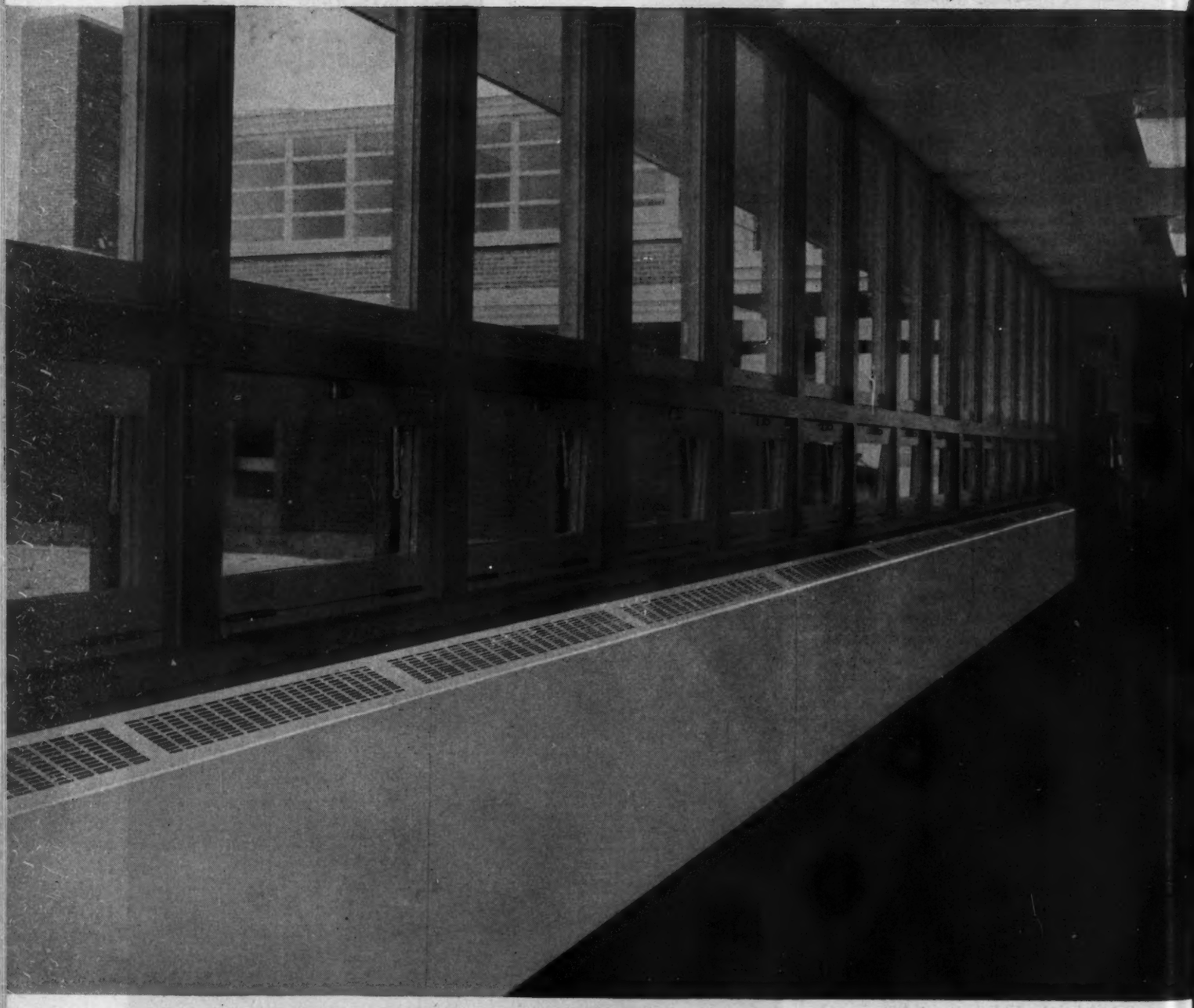
The Effect of Impact on Metals and Plastics can be measured by a new instrument developed in the Research Division of the New York University College of Engineering. The "impact tube," which describes impact in terms of dynamic stress-strain relationships, separates the effects of waves propagated by sudden shock. The tube is discussed in the June issue of the N. Y. U. *Engineering Research Review*, available on request from the Office of Information Services, New York University, University Heights 53, N. Y.

Design Practice for Reinforced Concrete in Shear is reviewed historically by research professor Evin Hognestatd of the University of Illinois. He states there are two major groups of specifications — German and American. They differ principally in that the former call for web reinforcement to be designed for *total* shear and the latter for *excess* shear over that assumed to be carried by the concrete. Different basic concepts of design as well as different economic patterns are the cause, the author says. He believes that failure by diagonal tension is possible in many structural elements designed by American specifications, especially in monolithic structures. But he points out that, from the point of view of design by allowable stresses, such a possibility is not of decisive importance. The study, *What Do We Know about Diagonal Tension and Web Reinforcement in Concrete*, published by the University of Illinois and reprinted by the Reinforced Concrete Research Council, is available from R. F. Blanks, 510 Denver National Bldg., Denver, Colorado, for 50 cents.





. . . Say "Trane"—and f



Trane Wall Line Convectors combine *low initial cost* with *low installation cost* to meet even the tightest heating budgets. Designed for attractive wall-to-wall applications in schools, office buildings, hospitals and institutions . . . wherever *high capacity* and *economy* are a must. Unusually rugged construction with extra reinforcements and full back. Over-all cabinet heights 14″, 20″, 26″; depths 4″ and 6″; lengths to 72″.

d fill any radiation need!

Nation's most complete line of fin-type radiation simplifies specifications and maintenance... concentrates responsibility.

CHURCH ROOM OR CLASSROOM, hospital, home or factory—no matter what type of building or where—*no matter what type of radiation*—this one-source supply can cut design time and help you plan better.

Specifications are simplified, maintenance made easier. And the reason is simple. TRANE manufactures the nation's most complete line of fin-type radiation, so *you* can concentrate responsibility in *one* reliable source.

Since 1925 TRANE has led the way in developing and improving a broad line of radiation products. You can depend on TRANE quality and TRANE ratings in job after job after job. TRANE product literature is complete, easy to use.

So on your next job—say "TRANE." Call your nearby TRANE Sales Office, or write TRANE, La Crosse, Wisconsin.

TRANE

MANUFACTURING ENGINEERS

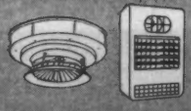
One source, one responsibility for:
Air Conditioning • Heating • Ventilating
Heat Transfer Equipment

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa. • Trane Co. of Canada, Ltd., Toronto • 90 U.S. and 17 Canadian Offices

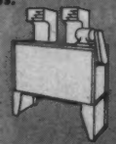
Matched Trane products for *all* your heating needs



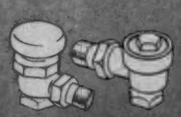
Force-Flo heaters block cold air, stop drafts.



Model H & P unit heaters put heat where you want it.



Terridor heaters deliver large volumes of air long distances.



Steam Specialties include full line of valves, traps, vents.

Trane Wall-Fin brings draft-free heating to long wall and window areas. Large tube diameters make it especially suitable for loop systems where pressure drop is critical. Use single element where capacity requirements are low, multi-tiered elements where high capacity per lineal foot is required. Sloping-top cabinets or expanded metal grilles. Choice of 1¼″ or 2″ steel or 1″ or 1¼″ nominal copper elements.

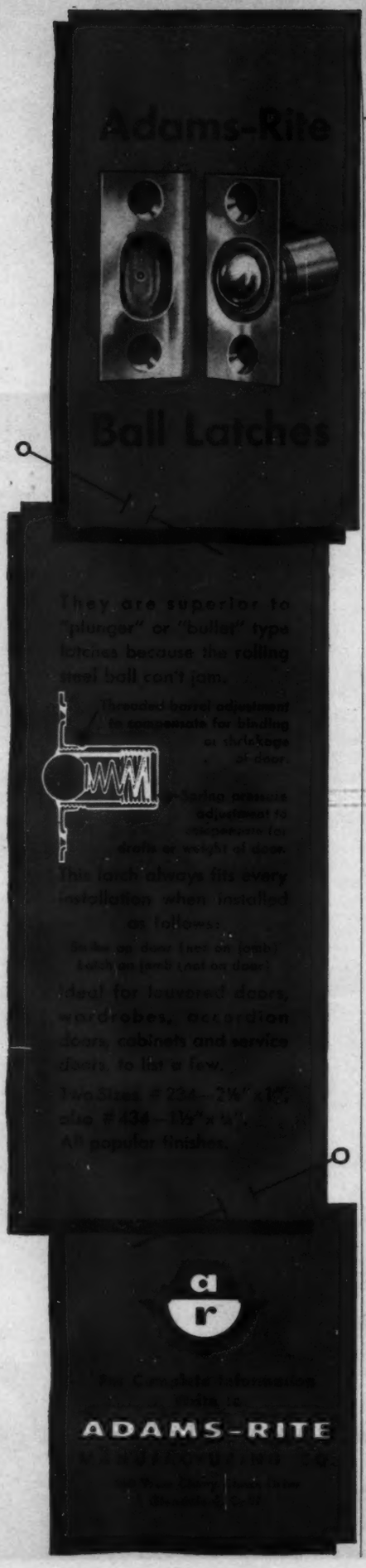


Trane Convectors combine efficiency with compactness and beauty. Aluminum-copper heating element responds quickly, provides heat instantly . . . eliminates wasteful overheating common to other types of radiation. Ideal for homes, offices, institutions. Can be installed free-standing, recessed or wall-hung. 21 cabinet styles with flat or sloping tops. Knob or chain dampers optional.



Trane Baseboard Convectors assure your homeowner clients greater comfort by heating where the cold begins —along *outer* walls, *under* windows. Give greater freedom of furniture arrangement, add beauty to any home. And they may be installed up to 50% faster because cabinet and coil come preassembled, closures *snap* together. Nonferrous heating element. 8¼″ and 12″ heights.

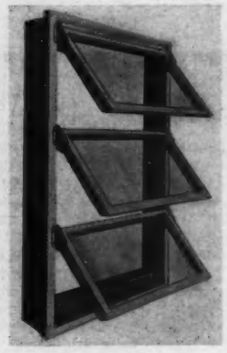




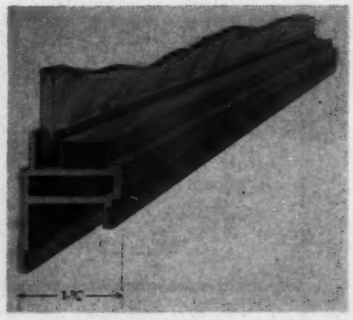
AE PRODUCTS

(*Continued from page 235*)

Jalousie Windows with stainless steel frames and weatherstripping of a synthetic rubber have louvers which are held tight by a special "dimple clip." Parts may be ordered to contain from 4 to 20 Arnold 4½-in. louvers. Heads and sills are furnished in any length up to 16 ft. *Arnold Products Sales Corp., Miami, Fla.*



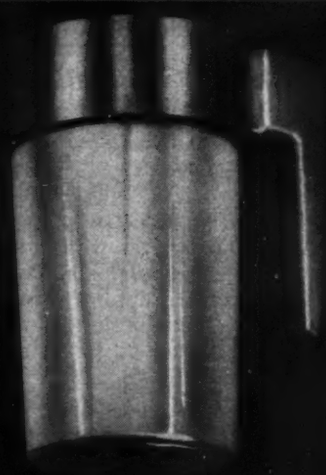
Wood Awning Window, in which all hardware is enclosed in the jambs and sill, eliminates all exposed operating mechanisms. Removable double glazing is available by use of aluminum framed individual storm sash that are easily applied to each vent. Standard sash rabbeting will take Thermopane glass. *Gale City Sash & Door Co., 15 S.W. Third Ave., P.O. Box 901, Fort Lauderdale, Fla.*



Tubular Aluminum Windows employing specially tempered 6063S aluminum alloy will make possible larger expanses of glass in both the vent and fixed portions of windows, says the manufacturer. Series T-500 windows are fabricated of aluminum alloy of 28,000 psi and will accommodate ⅛-, ¼-, ½- or ¾-in. glass. Two-point weather stripping is an animal fiber pile with plastic backing which slides into grooves in the extruded sections. *Valley Metal Products Co., Dept. CCN, Plainwell, Mich.*

(*Continued on page 268*)

design by mcPhilben



A Vapor-Tight Wall Bracket

dynamically new . . . obsoletes all old wall brackets!

A modern building with yesterday's fixtures is like a lovely woman wearing last year's hat. McPhilben's new multi-use wall bracket the '43-40 series is beautifully honest in design . . . of rugged, no maintenance-needed, die cast aluminum vaportight, versatile and competitively priced.

APPLICATIONS: Stair landings, Corridors, Lavatories and Entrances, Schools, Hospitals, Office buildings and Housing.
SPECIFICATIONS: 43-40 VT, die cast aluminum, satin finish anodized, quickly mounts to 4" cast iron junction box . . . for indoor application suitable for standard outlet box.
WATTAGE: Maximum 100 watt — Globe: Threaded opal with gasket. Write for Data Sheet on complete VAPORTIGHT SERIES.

DIE CAST PROTECTIVE GUARD AVAILABLE (43-44VT) for locations where protection against theft and vandalism is essential. Also available as a ceiling fixture.



1331 Willoughby Avenue, Brooklyn 37, N. Y.

CONSULT mcPhilben Lighting SPECIFY

Representatives in major cities
Stocked By Electrical Wholesalers

Carey Fire-Chex

PERMA-TOPP ROOFING



erma-Topp being applied over wood deck after removal of old roofing. he 1st ply has been applied and 2nd ply is being started.



Here, the 2nd ply is being completed.

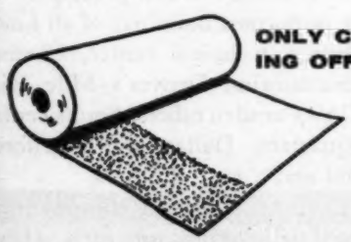
The totally NEW Built-up roofing that combines BEAUTY with greater TOUGHNESS and FIRE SAFETY than ever before possible!

No longer are you limited in your specifications to dull, drab built-up roofing for industrial and commercial installations. With Fire-Chex Perma-Topp, the saw-tooth or domed roof can be architecturally beautiful, colorful, heat-reflective! What's more, Perma-Topp lasts longer, provides greater protection against fire, weather and corrosive fumes.

Carey Fire-Chex Perma-Topp Roofing contains a patented formulation, developed after extensive laboratory and field testing. It stays tough, resilient, even through continuous exposure to sizzling temperatures (up to 185° F.) that dry out the vital oils in **ordinary** roofing causing disintegration, cracking, failure. Moreover, it has the Underwriters' Laboratories, Inc. Class B rating.

Perma-Topp's slate granule surface provides colorful beauty — with heat reflective properties when the lighter colors are specified. It never needs resurfacing, thus coating maintenance costs are eliminated . . . an economy feature your clients will appreciate. Perma-Topp will not "slide," another reason why it's ideal for saw-tooth or dome roofs. The coupon below will bring you complete specification details on Carey Fire-Chex Perma-Topp Roofing.

If you wish, a Carey Roofing Engineer will be glad to discuss the features of Perma-Topp with any member of your staff.



For the utmost in Fire-Safety, Fire-Chex Perma-Topp Roofing should be installed with the now famous Fire-Chex Vapor Barrier

ONLY CAREY FIRE-CHEX PERMA-TOPP ROOFING OFFERS ALL THESE ADVANTAGES!

- Beauty never available before
- Ability to withstand high temperatures
- Fire-Chex patented formulation
- Never needs coating
- Never needs resurfacing
- Will not slide
- Class B fire safety rating
- Three plies
- Easy to install
- Can be installed on hip and ridge roofs with less than 4" pitch

You can count on **Carey**

diversified products for industry, farm and home since 1873

The Philip Carey Mfg., Company
Lockland, Cincinnati 15, Ohio
In Canada: The Philip Carey Co., Ltd., Montreal 3, P. Q.

CLIP AND MAIL TODAY!

The Philip Carey Mfg., Company **Dept. AR 9**
Lockland, Cincinnati 15, Ohio

☐ Please send specifications and details on new **FIRE-CHEX PERMA-TOPP ROOFING.**

☐ Please have a Carey Industrial Sales Engineer call.

NAME_____

FIRM_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

$25,000

- sponsored by: FERRO CORPORATION
- conducted by: Architectural FORUM
- professional adviser: Harold R. Sleeper, F.A.I.A

Since 1940, the use of porcelain enamel metal in buildings has multiplied 25-fold and the trend is ever increasing. Whereas in 1940 this material was used mainly as an exterior wall finish for small service buildings and store fronts, today it is used as the principal wall material for important buildings of all kinds: General Motors' technical center, Clemson College's dormitories, Denver's Mile High Center, RCA's Camden offices, Ford's central staff headquarters, Dallas and Hartford's Statler Hotel and a host of others.

Porcelain enamel steel and aluminum are being adapted daily to new uses such as classroom chalk boards, exterior and interior murals, acoustical panels, interior finishes and decorative features. However, despite the rapid development of this building material, only a limited number of designers have gained a knowledge of its advantages and only a few of the material's limitless possibilities have been investigated.

purpose:

The primary purpose of this competition is to stimulate design interest and widen experience in the use of porcelain enamel steel and aluminum, to improve present methods of application and to encourage the exploration for new uses. It is also hoped that the designs submitted in this competition will encourage communities across the nation to build better schools and community youth centers.

the problem:

The competition problem consists of two divisions:

1. The design of an elementary school to consist of a kindergarten, six classrooms, a multi-purpose room and certain attendant facilities.

2. The design of a community youth center to consist of a lounge, a multi-purpose recreation room, a small theatre, a music library and certain other accessory rooms.

A contestant may enter any number of submissions in either or both divisions of the competition. However, no contestant, including the Grand Prize winner, is eligible to receive more than one prize in each division.

porcelain enamel design competition

$25,000 IN 25 AWARDS

GRAND PRIZE - $5,000

Elementary School

1st Prize	$ 3,000
2nd Prize	1,500
3rd Prize	1,000
Honorable Mentions: 9 at $500 each	4,500
TOTAL	$10,000

Community Youth Center

1st Prize	$ 3,000
2nd Prize	1,500
3rd Prize	1,000
Honorable Mentions: 9 at $500 each	4,500
TOTAL	$10,000

The Grand Prize will be awarded to the submission in either division which, in the opinion of the jury, goes furthest toward accomplishing the purposes of the competition.

Basis of Awards:

Awards will be made on the basis of:

1. Skill in planning and excellence of design.
2. Use of porcelain enamel steel and aluminum, including practical new uses of these materials and improved methods of detailing.
3. Clarity of presentation.

Eligibility: This competition is open to architects, designers, draftsmen and students of architecture who are residents of the continental United States and Canada, except the following, their employees, office associates, and families: members of the Jury, Ferro Corporation, its advertising agency, Architectural FORUM and the Professional Adviser.

This competition has been approved by The American Institute of Architects.

The competition closes December 12, 1955.

Announcements of Awards: On or about January 16, 1956.



Contestants must register (coupon right) to receive the program, which will include further details of the competition. This is an announcement only; conditions governing the competition and the awards are set forth in the program.

Harold R. Sleeper, F.A.I.A., Professional Adviser
c/o Architectural FORUM
9 Rockefeller Plaza, New York 20, N. Y.

I intend to enter the Porcelain Enamel Design Competition. Please send me the program, including the conditions governing the competition and the awards.

Name_____

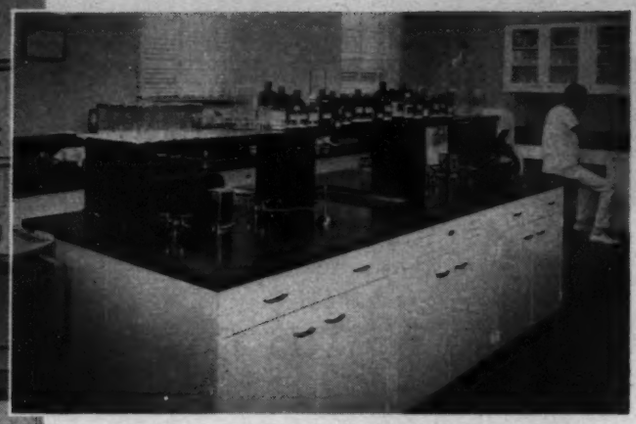
Firm (if any)_____

Address_____

City_____ Zone____ State_____

Check one: Architect ☐ Designer ☐ Draftsman ☐ Student ☐





Above: Laboratory; Below: Nurse's Station.



Here are views of the recently completed King's Daughters Hospital, Shelbyville, Kentucky. Architects: Nevin & Morgan, Louisville, Kentucky. Pharmacy illustrated above.

NEW
KING'S
DAUGHTERS
HOSPITAL



selects
St. Charles
STEEL CASEWORK

Another impressive name is added to the long list of hospitals that are experiencing the many benefits of St. Charles casework. Architects have found that St. Charles long years of experience, competent personnel, and the nation's newest, most modern casework fabricating plant offer complete assurance of satisfying their specifications, from blueprint to reality.

St. Charles methods of custom-building and color styling place no limit on creative imagination, when you design and specify hospital casework.

To assist you in planning maximum efficiency into hospital casework, St. Charles offers a wide range of special units designed specifically for this demanding field. St. Charles also maintains a complete design and layout service, freely available to you in whatever degree you wish. Upon receipt of your enquiry, complete details will be sent you promptly.



A newly published, 40-page catalog, "St. Charles Hospital Casework," will be mailed to you when requested on your letterhead.

St. Charles

casework · sinks and counters · special purpose units

ST. CHARLES MANUFACTURING COMPANY, DEPT. AR, ST. CHARLES, ILLINOIS

VISIT OUR BOOTH 356 AT THE AHA CONVENTION, ATLANTIC CITY



Give your homes

cooling luxury at lowest cost

with a Hunter Attic Fan

One easy-to-install unit cools entire home

You can now provide all the luxury of a cooling system that fills an entire home with refreshingly cool air—at a very low investment per house.

The Hunter Package Attic Fan is as efficient as it is economical. Quietly pulling in fresh, outdoor breezes as it forces out hot, sticky, inside air, the Hunter will cause room temperature to quickly drop from 10 to 20°.

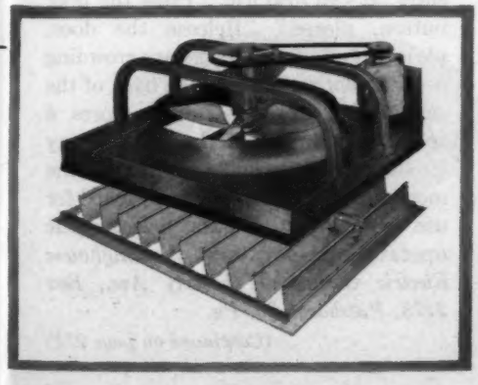
Easiest of all attic fans to install, the Hunter requires no replastering, repainting, suction box or other "extras" for installation or maintenance.

The compact fan unit rests on the attic floor. Ideal for even low-pitched roofs, the Hunter needs only 18" to 26" attic clearance. The "flush-mounted" automatic ceiling shutter (shown above) screw-fastens over ceiling opening, fits narrow hallways. Its eggshell finish blends with all interior colors.

Guaranteed Performance: the Hunter fan unit is guaranteed for five years; motor and shutter for 1 year. Costs only a few cents a day to operate. Only $137.60 list for the 5,000 CFM model, the Hunter is available in four sizes, with certified air deliveries to 16,000 CFM.







See our catalog in Sweet's File . . . $\frac{28e}{Hu}$

Hunter Attic Fan

HUNTER FAN and VENTILATING COMPANY
396 S. Front St. • Memphis, Tenn.

Write or wire today for new 1955 Hunter Catalog

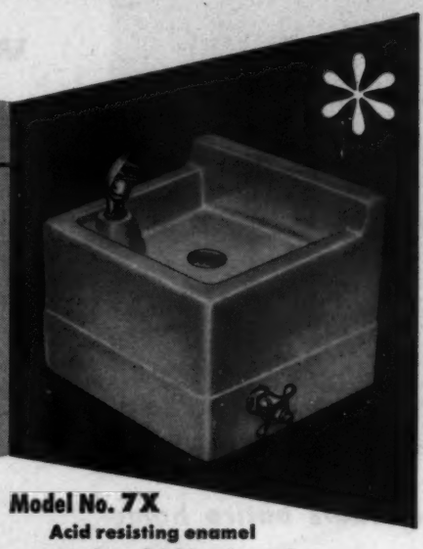
(Continued from page 262)



Fiberglas Foil-enclosed Insulation for residential buildings, claimed to be the first mineral wool insulation with aluminum foil on both sides, combines the year-round insulating efficiency of Fiberglas with the added summer reflective characteristics of aluminum foil. It will thus help cut operating costs of home air conditioning units. The insulation is produced in widths of 15, 19 and 23 in. for use with studs spaced 16, 20 and 24 in. on centers and in thicknesses of 2 and 3 in. It can be cut with a knife or shears and then nailed or stapled to wall studs through nailing flanges. *Owens-Corning Fiberglas Corp., Toledo 1, Ohio.*

Electro-Klean Air Filter removes foreign matter from the air by electrostatic attraction. It is claimed to be the only electronic air-filtering system adaptable to central heating and air conditioning systems that requires no water or drain connections. The only maintenance required is annual replacement of filter cells. Electro-Klean is available in many sizes to fit any type installation. *American Air Filter Co., Inc., Louisville 8, Ky.*

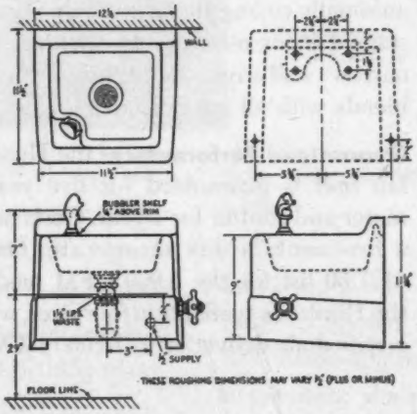
another New HAWS FOUNTAIN!
a product of modern styling



Model No. 7X
Acid resisting enamel
cast iron drinking fountain
Designed by CHANNING WALLACE GILSON
Industrial Designer

FOR PERFECT ADAPTATION to current architectural trends . . . and constructed of durable acid-resisting enameled cast iron to withstand the severest abuses of the school yard, this new HAWS drinking fountain assures lasting trouble-free service.

HAWS Model No. 7X drinking fountain contains HAWS *complete sanitation* features . . . with raised, shielded, angle-stream fountain head of chromium plated brass. Water pressure and volume is automatically controlled . . . it's anti-squirt!



WRITE TODAY for full details of HAWS Model No. 7X...a complement to new construction...a vast improvement for modernization! *It's designed to meet ALL city, county and state material and operational sanitation requirements.* Specify HAWS with confidence!

HAWS DRINKING FAUCET CO.
1443 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA



Plastic Putty in tape form is easily applied to factory and institution skylights, door frames, windows, etc. Mounted on non-corrosive metal foil, "Mend-O-Lastic Adhesive Bar Cap" is placed over the break and rolled back. It makes a tight seal, conserving heat and permitting normal expansion of glass and frame caused by extreme temperature changes. *Fennia Laboratories, Franklin Park, Ill.*

Vocal Automatic Elevators can deliver recorded messages to elevator passengers. The messages stored on a magnetic tape in a remote location are reproduced by loudspeakers concealed within the walls of the elevator. The recorded voice announces, "This car up" or "This car down" as passengers enter. It can also ask, "Press the floor button, please," "Release the door, please," and, if passengers are crowding near the doors, "Step to the back of the car, please." In department stores a special adaptation of the system may announce floors and summarize the merchandise. The system is designed for use with Westinghouse Selectomatic operatorless elevators. *Westinghouse Electric Corp., 401 Liberty Ave., Box 2278, Pittsburgh 30, Pa.*

(Continued on page 272)



Inexpensive Luxury!

that is more than a beautiful floor covering

HAKO Vinylflex

The ability of a floor tile to stay beautiful is the sum total of numerous factors—color, surface and resistance to everyday indoor highway wear. All these and built-in protection against greases, oils, mild acids, alkalies, gasoline and naphtha are important properties of this all-purpose plastic floor tile. Flexibility, resilience and unlimited application possibilities are inherent in Vinylflex. Vinylflex is used in homes, commercial establishments, institutions and industry with exceptional results in performance and economy. Vinylflex Plastic Floor Tile carries the Hachmeister workmanship and quality material warranty. Write for suggestions on how HAKO Floor Tiles can help you.

Guaranteed by Good Housekeeping

SINCE 1903

HACHMEISTER-INC.

PITTSBURGH 30, PA.

◆**FLOOR TILES**—Asphalt, Poly-Krome in Vinyl or Asphalt, Parquetry and CorkAtile ◆**CORONET PLASTIC WALL TILES**—Majesty, Regal, Duke ◆**ADHESIVES**—for Building Products



When there is more "out there"



in here, the kids are happier

Nothing frustrates a youngster faster than being shut in. All he can think about is getting out.

That's why you see Daylight Walls with their clear glass from wall to wall and sill to ceiling in so many new schools.

They cut costs, too. Artificial lighting isn't needed so much. There's less wall area to paint and maintain. Even construction costs are lower. In cold climates, your Daylight Walls should be *Thermopane*® insulating glass for the greatest comfort and heating economy. For more product information, call your local Libbey · Owens · Ford Glass Distributor or Dealer (listed under "Glass" in the yellow pages of your phone book). ®

Write today for this free book. Complete information and illustrations on school daylighting. Dept. 4195, Libbey · Owens · Ford Glass Company, 608 Madison Ave., Toledo 3, Ohio.



THERMOPANE · PLATE GLASS · WINDOW GLASS

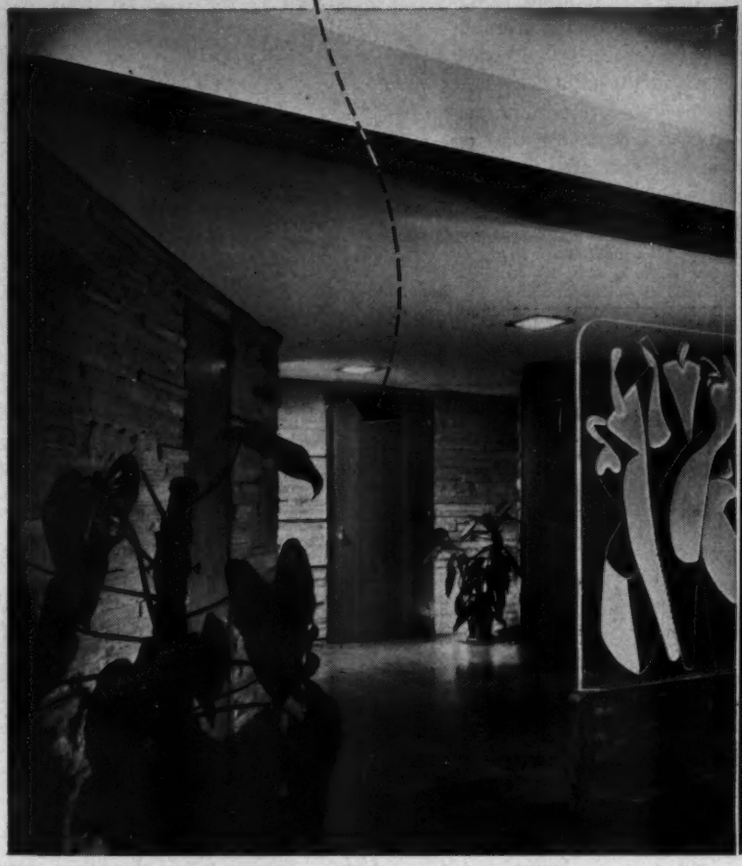
LOF GLASS

DAYLIGHT WALLS

. . . THAT LET YOU SEE

LIBBEY · OWENS · FORD GLASS CO., TOLEDO, OHIO

FOR *Distinctive* BEAUTY AND *Architectural* PERFECTION



Photograph by Hedrick-Blessing

George Fred Keck — William Keck, Architects.

PAINE

REZO

T. M. REGISTERED

all-wood grid core

FLUSH DOORS

America's Finest





Styles, designs and applications limited only by your imagination.

Flush doors may appear alike . . . but only Paine Rezo Doors have:

1. Hand-matched hardwood faces for a rich blend of color and grain that give distinctive beauty and architectural perfection in any modern home design.

2. Air-vented, grid core construction, for dimensional stability in any climate, assuring a life-time of trouble-free service.

Proven by nearly 7,000,000 installations, backed by over a century of millwork craftsmanship, Paine Rezo Doors are truly America's finest!

For full details, write:

PAINE

LUMBER COMPANY, LTD.

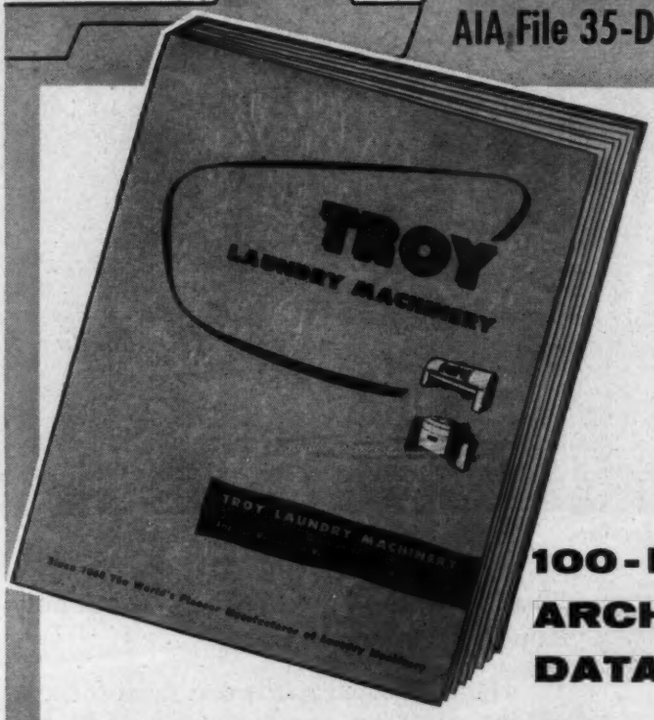
ESTABLISHED 1853 • OSHKOSH, WIS.

(*Continued from page 268*)



Dimming System for hot cathode fluorescent lamps is recommended by the manufacturer for control of fluorescent cove lighting, luminous ceiling and multiple-lamp fixtures. The dimming range is from 750 to 1 in intensity, and a single dimmer can handle 1 to 160 40-watt lamps. The components of the system include an auto-transformer dimmer and auxiliary transformer for one or more lamps and a specially designed ballast. Designed for operation on a 120-volt, 60-cycle, two-wire line. *Ward Leonard Electric Co., Mount Vernon, N. Y.*

AIA File 35-D-1, 2, 3



100-PAGE ARCHITECTS DATA BOOK.

the complete LAUNDRY planning guide

If your firm designs hospitals, hotels or institutions that have their own laundries, send for this book. It shows machine dimensions, steam and electrical requirements, typical floor plans . . . and contains many other helps.

An experience-tested layout based on direct work flow, plus modern labor-saving machinery, gives your client the most efficient laundry possible — at an actual savings in floor space. So send for this book while the laundry is in the early planning stages.

clip and attach to your letterhead

Troy
LAUNDRY MACHINERY
Division of American Machine and Metals, Inc.
East Moline, Illinois

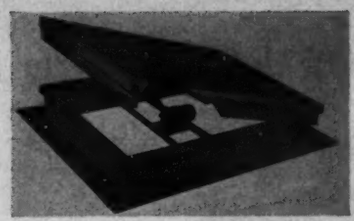
Our firm designs hospitals, hotels or institutions.

Please send me, without obligation, the 100-page Architects Data Book containing data on laundry planning.

NAME TITLE

PROJECT AR-955

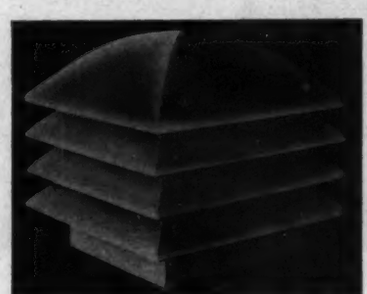
World's oldest builders of power laundry equipment



Ventilating Skylight, either motorized for remote control, as in picture above, or manually operated, has a cover of corrugated reinforced plastic in an extruded aluminum frame. The Marcolite skylight has a self-contained curb and roof flange and requires no additional flashing. *The Marco Co., 45 Greenwood Ave., East Orange, N. J.*



Redwood Plywood. A boldly textured redwood plywood for interior and exterior use has vertical grooves $\frac{3}{8}$ in. wide and $\frac{1}{4}$ in. deep on 4-in. centers. Panels are 4 by 8 ft with shiplapped edges. *M & M Wood Working Co., 2310 N. Columbia Blvd., Portland, Ore.*



Power Roof Ventilators have been restyled in a combination of round- and bulb-nose shapes to give a modernized appearance and also to provide maximum strength. The standard modular bodies are available in seven basic "plan or top view" sizes, the smallest being 30 by 30 in. outside dimension, and increasing in 6-in. increments to the maximum size of 66 by 66 in. Any number from 1 to 10 modular stacks can be used. Any power section — centrifugal or propeller, direct or belt drive — can be used in the body, or the empty body may be used for intake or exhaust. *Roof Ventilator Div., Atmos Corp., 1215 West Fullerton Ave., Chicago 14, Ill.*

(*Continued on page 276*)

marble

an effective and economical radiation shield

Marble is the only effective shielding material which is also a finished wall surface.

It is the only such effective shielding material available at all times in unlimited quantities.

A definitive report on the use and economy of Marble as a radiation shield has been prepared in co-operation with the Atomic Energy Commission. A copy will be sent you free if you write:



MARBLE INSTITUTE OF AMERICA, INC.

108 FORSTER AVENUE MOUNT VERNON NEW YORK



BUILT-IN REFRIGERATOR AND FREEZER UNDER-COUNTER DISHWASHER FOOD WASTE DISPOSER UNDER-COUNTER WATER HEATE

Who could resist a built-in kitchen like this?

These seven wonderful Westinghouse Appliances can make the kitchen the most glamorous room in your houses.



BUILT-IN RANGE—SURFACE UNIT AND OVEN

BUILT-IN LAUNDROMAT® 25

Capitalize on the fast-gaining trend to built-in kitchens! These handsome, matching Westinghouse Appliances are not dream models—they're here right now.

Each a leader in its field . . . each packed with outstanding features, including color . . . these built-in units will transform the kitchen into the top salesroom of your homes. You'll be surprised at what a difference this complete package will make.

You'll be delighted, too, with the new freedom in planning with Westinghouse Built-in Appliances. They offer wide flexibility of arrangement, a high degree of space organization, and a contemporary styling that catches the imagination.

And remember, these built-in appliances are by Westinghouse—a name that means quality to your prospects, a brand with a proud record for service. For complete details, contact your nearest distributor or write direct.

* * *

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division, Mansfield, Ohio

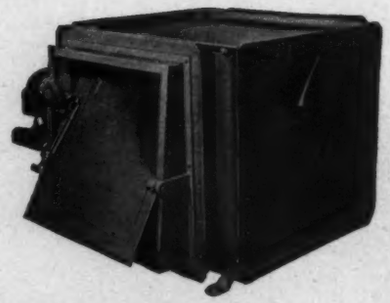
YOU CAN BE SURE... IF IT'S Westinghouse

Are you still depending on Natural Draft?



Install a WING motorized DRAFT INDUCER —and end your draft troubles

No more will you have to worry about the effect of weather conditions on your furnace, about lack of draft due to cold chimney after shutdown, about smoke, soot or gases due to poor draft, or low CO_2, resulting in high fuel bills. The WING Draft Inducer eliminates all these troubles, insuring positive, adequate, uniform draft at all times.



Write for Bulletin. Use the Coupon.

L. J. Wing Mfg. Co. 151 Vreeland Mills Road, Linden, N.J.

Factories: Linden, N. J. & Montreal, Canada

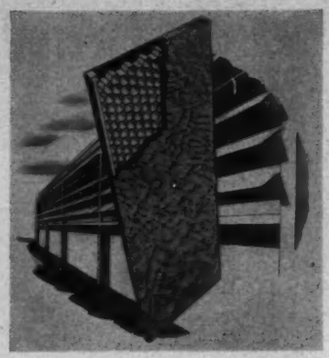
L. J. Wing Mfg. Co., Linden, N. J. AR-9
Please send me bulletin on WING DRAFT INDUCERS.
Name.....
Firm.....
Address.....
City..... Zone..... State.....

Wing



AE PRODUCTS

(*Continued from page 272*)



Modern Vent Solar Shades, with faces of aluminum or reinforced plastic sandwiched over an aluminum honeycomb, are light and weather-resistant. The aluminum louvers have high reflective qualities. The shades are controlled from inside by a roto-type operator and can be installed either horizontally or vertically. *Superior Window Co., 5300 N.W. 37th Ave., Miami, Fla.*



Insulated Exterior Wall Panels, available in aluminum, steel, stainless steel, rigidized metal, aluminized steel or fire-resistant asbestos-protected metal wall, have an insulation efficiency rating of up to three times that of an 8-in. brick wall, according to the manufacturer. All interior surfaces of *American Pan–L–Wall* are protected against corrosion and discoloration due to electrolytic action and against deterioration from condensation. *American Steel Band Co., Box 565, Pittsburgh 30, Pa.*

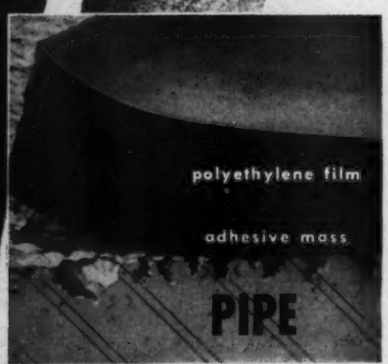
Emergency Electric Generating Plant of 75,000 watts capacity has been designed to meet the increased electrical requirements of modern institutions where interruption of electric power would result in costly losses. Model 75HR is practical for standby installation in buildings where many electric motors provide essential power for other needs. *D. W. Onan & Sons Inc., Minneapolis 14, Minn.*

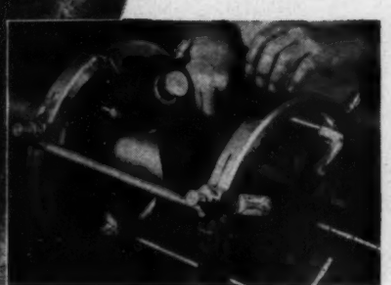
(*Continued on page 280*)

POLYETHYLENE PROTECTION YOU WRAP ON!

Polyken Protective Tape Coatings Control Corrosion

more efficiently and with less work!





Polyken Tape Protective Coating available in two thicknesses — 12 mil black No. 900 and gray No. 910; 20 mil No. 920

GREATER EFFICIENCY

Here's why *Polyken* Protective Tape Coatings provide more efficient protection:

- *Preformed* plastic film coating . . . manufactured by a controlled process from reproducible raw materials to assure uniform coatings every time.
- *Polyethylene* coating consisting of tough, oriented, elastic film . . . recognized for its excellent resistance against corrosive attack, its resistance to moisture, and its high dielectric strength.
- *Bonded* securely by a stable adhesive, a durable protective barrier in itself.

LESS WORK

Apply this *Polyken* Protective Tape Coating *right off the roll.* Requires no heat, liquids, solvents or thinners. Eliminates drying time, clean-up time and shut-down time. Even inexperienced workmen can apply it at 20 to 30 feet per minute by machine. Goes on tightly and evenly.

Polyken®

CONTROLLED STRENGTH

PROTECTIVE COATINGS

Polyken Products Department of The Kendall Company

Polyken, Dept. AR-1
Department of The Kendall Company
222 West Adams St., Chicago 6, Illinois

Please send me samples and further information on *POLYKEN* PROTECTIVE TAPE COATINGS.

Name_____ Title_____

Company_____

Street Address_____

City_____ Zone____ State_____



Pella®

MULTI-PURPOSE WINDOWS

Go the limit on window arrangements... yet stay within the limit of cost

You can create an infinite number of arrangements with PELLA MULTI-PURPOSE WINDOWS. Use these units as casements, hopper vents or awning windows. Employ them in ribbons or stacked. Utilize many possible combinations of ventilating and fixed units. The wide range of stock sizes, all compatibly proportioned, allow arrangements unlimited! Yet for all this versatility, PELLA MULTI-PURPOSE WINDOWS are truly low in cost.

PELLA MULTI-PURPOSE WINDOWS combine into interesting, practical arrangements for homes, schools and commercial buildings. They come completely factory-assembled, with all sash hardware attached. And the frame is flat on all sides for quick, easy installation.

Clients appreciate PELLA'S work-saving features too. In fact, with no other window can you give a client so much at so low a cost. Investigate today. See the PELLA catalog in Sweet's Architectural File. Or mail coupon for free literature.

SEND FOR FREE LITERATURE

COMPARE ALL THESE FEATURES!

- Underscreen Operator at no extra cost (for easy closing, positive locking)
- Self-storing storm sash (optional)
- Inside, self-storing screens
- Stainless steel weatherstripping around all 4 sides of sash
- Toxic-treated western pine frame and sash
- Full 1¾" sash
- Joints mortised and tenoned, doweled and glued
- Seven fixed or ventilating modular sizes —plus 3 large fixed sizes

Pella®

MULTI-PURPOSE® WINDOWS

ROLSCREEN COMPANY, Dept. G-7
PELLA, IOWA

Gentlemen: Please send free literature on PELLA MULTI-PURPOSE WINDOWS, with name of nearest PELLA distributor.

FIRM NAME

ADDRESS

CITY ZONE STATE

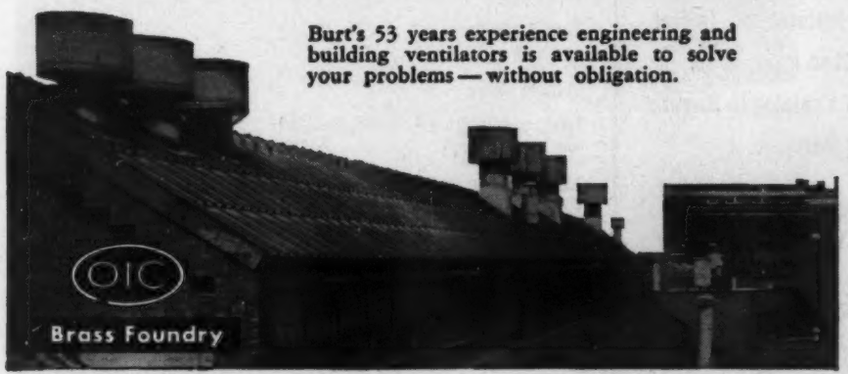
ATTENTION MR.



BURT VENTILATORS SOLVE LOCATION AND PRODUCTION PROBLEMS FOR OIC VALVES

The Ohio Injector Company, Wadsworth, Ohio — one of the nation's largest manufacturers of industrial valves — had two problems. Their plants are in a valley with almost no natural air movement. Their busy foundries create high heat, fumes and dust. Burt Ventilators solved both. Fifteen 30" Burt Free-Flow Ventilators on their Iron and Bronze Foundry and eleven 36" units on their Brass Foundry change the air every 3½ minutes. In other buildings, carefully spaced 60" Burt Free Exhaust Fan Ventilators provide fast, volume exhaust, changing the air every 4½ to 5 minutes. Workmen praise the system. Production has improved materially.

Burt's 53 years experience engineering and building ventilators is available to solve your problems — without obligation.





Send for **FREE** *Data Book!*

Write for Burt Data Book SPV-101-E. It supplies quick data on Burt's complete line of modern Roof Ventilators.

FAN & GRAVITY VENTILATORS • LOUVERS • SHEET METAL SPECIALTIES

The Burt Manufacturing Company

48 E. South St. Akron 11, Ohio

MEMBER POWER FAN MANUFACTURERS ASSOCIATION

AE PRODUCTS

(Continued from page 276)

Damp-proofing Paint. A coating for damp-proofing and decorating exterior and interior concrete, masonry and stucco walls is available in 9 colors. The coating, which can be applied with whitewash brushes, is said to have a service life up to five times that of ordinary waterproof paints. The dry and liquid elements of the product are packaged separately and mixed on the job prior to application. *Allied Compositions Co., 11-15 44th Rd., L. I. City, N. Y.*

Built-in Gas Range. A fully automatic gas range with an oven designed to fit into a 24-in. cabinet and a 4-burner top that will fit into a 24-in. space has controls at eye level. The oven is fully chrome-lined with a counter-balanced door with a window. The exterior finish is of satin chrome. *The Tappan Stove Co., 250 Wayne St., Mansfield, Ohio.*

Painting Analysis. A painting analysis service provides technical aid for solving commercial, industrial and institutional maintenance painting problems involving machinery, areas exposed to fumes or moisture, steel framework and pipes conducting liquids and gases. The service also provides industrial, commercial and institutional color recommendations and will demonstrate various finishes and train maintenance personnel. *The Glidden Co., Cleveland, Ohio.*

Quick-opening Door. A self-seating, quick-opening door reduces the time to open heat exchangers, autoclaves, sterilizers and other pressure vessels. It is locked and unlocked by means of bars and is particularly suited for use on heat exchangers that require frequent entry for cleaning and inspection. Capable of withstanding temperatures from —70 deg to 400 deg, and pressures ranging from full vacuum to 300 psi, the door has a tight-fitting closing gasket and automatically seats itself when closed. *The Patterson-Kelley Co., Inc., 10 Lackawanna Ave., E. Stroudsburg, Pa.*

Automatic Washer. The basis of an automatic washer-dryer is the use of powerful water currents instead of an agitator. The dryer dries an average load in from 20 to 27 min and can be operated with or without heat. It is available with Formica work surface tops in seven standard decorator colors. *Crosley and Bendix Nome Appliances, Div. of Avco Mfg. Corp., Cincinnati 25, Ohio.*

(Continued on page 284)

SHADOWLESS LIGHTING—BY GUTH GRATELITE*



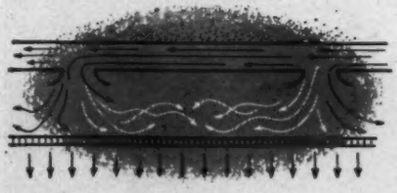


"THE GREATEST LIGHTING-IN-ACTION TEST EVER MADE!"
(PHOTO NOT RETOUCHED)

. . . it shows why the Martin Company of Baltimore chose Guth GrateLite Ceilings as *"the best possible lighting"* for their new 70,000 sq. ft. Engineering Building:

65 foot-candles without shadows from drafting instruments or hands. No sight fatigue after close, accurate work with fine details.

The entire ceiling glows with seemingly sourceless light . . . softly diffused, low brightness light . . . glare-free and evenly distributed.



PLUS AN AIR-CONDITIONING BONUS!

The ⅜" grids help diffuse the conditioned air and distribute it evenly over the entire work area without drafts.

WRITE ON YOUR LETTERHEAD FOR DETAILED GRATELITE INFORMATION.

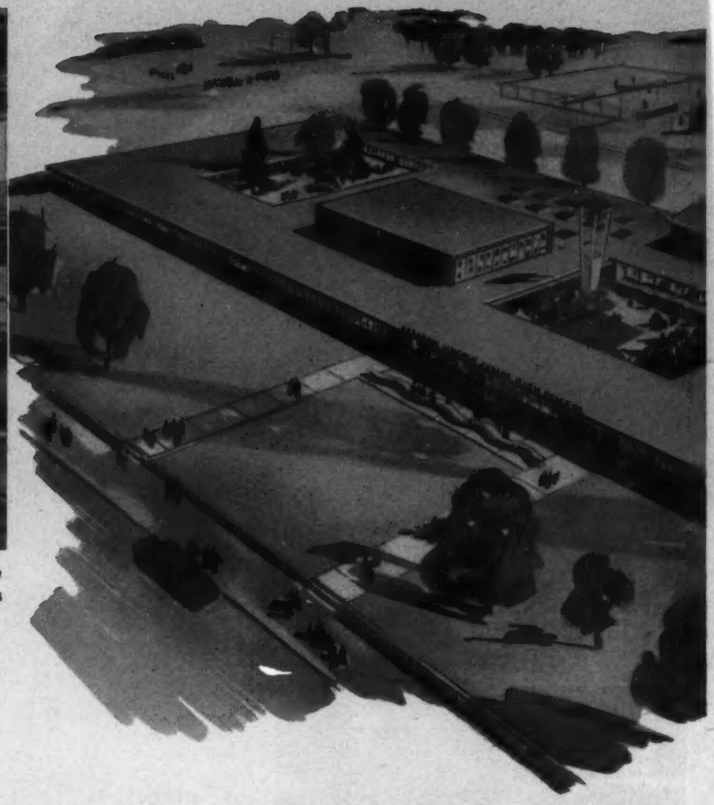
THE EDWIN F. GUTH COMPANY Guth **ST. LOUIS 3, MO.**

Trusted NAME IN LIGHTING SINCE 1903

*TM REG. U. S. & CAN. PATS. PEND.



Republic "Inch-Marked" E.M.T. is approved by the National Electrical Code for concealed, exposed and concrete installations. It also meets standards of Underwriters' Laboratories and carries their inspection seal.



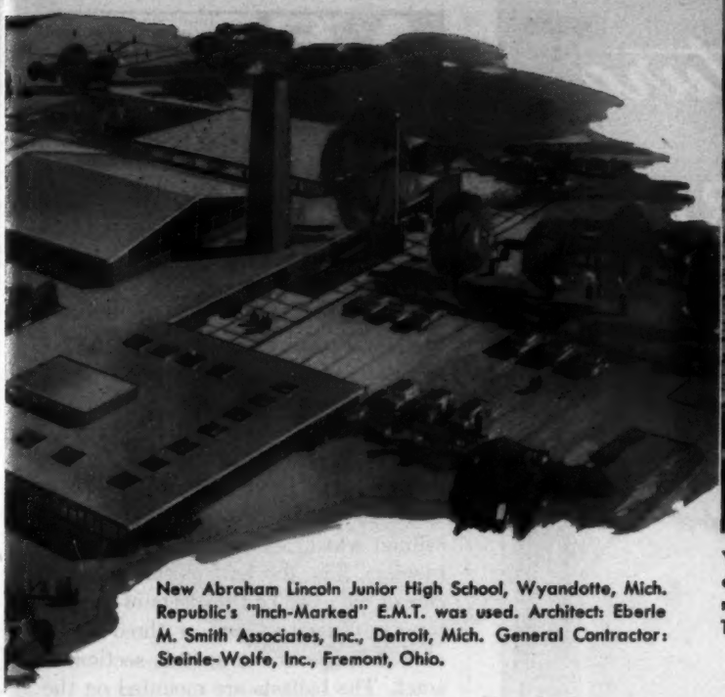
How to keep wiring safe and costs down



CONTEMPORARY DESIGN AND TRUSCON STEEL WINDOWS work hand in hand to allow skillful use of wide, sweeping expanses of glass. These windows made by Republic's Truscon Steel Division, also help provide controlled ventilation and seal weather out or heat in. Here is how Saarinen & Saarinen & Saarinen, Architects, Detroit, Mich., used Truscon Intermediate Projected and Donovan Steel Windows at Drake University, Des Moines, Iowa.



BRIGHT, ATTRACTIVE, EASY TO MAINTAIN, these steam-jacketed kettles in the refectory kitchen at Brown University are made of Republic Enduro Stainless Steel. The surface is solid, cannot chip, flake or peel. It resists dents, abrasion, rust and corrosion. Long service life of Enduro equipment makes it a good investment for any of your clients. And it can also be used for handrails, doors and other decorative purposes.



New Abraham Lincoln Junior High School, Wyandotte, Mich. Republic's "Inch-Marked" E.M.T. was used. Architect: Eberle M. Smith Associates, Inc., Detroit, Mich. General Contractor: Steinle-Wolfe, Inc., Fremont, Ohio.



Your client wants a job that's up to standard and yet stays within cost estimates. You want a job you can be sure of—one that safeguards your reputation. You can have both when you write "Republic Electrical Metallic Tubing or equal" into your specifications.

Your clients can have both of these advantages when your specifications read "Republic E.M.T. or equal."

Then, you can be sure electrical wiring is safe. In Republic "Inch-Marked®" Electrical Metallic Tubing you get the mechanical and electrical protection inherent in a steel conduit system. Wiring circuits are protected against fire, moisture and mechanical injury.

Corrosion resistance is unbroken from end to end. There are no threads to cut. Connectors and couplings go over the tube to make tight joints without disturbing the galvanized finish. And this finish will not chip, flake or peel.

The same number of wires and the same wire sizes are permitted for Electrical Metallic Tubing as for rigid steel conduit. And Republic E.M.T. is approved by the National Electrical Code for open, concealed and concrete-slab construction.

The contractor can help you keep costs down when you give him a choice of raceways. That means he can use his skill and knowledge of electrical installation, along with the product and installation advantages of Republic "Inch-Marked" E.M.T. And you get closer bids.

Add up all these safety advantages, plus the possible bid savings. Then check your specifications. If you need more facts, mail the coupon. Sweet's File will also give you vital information on this modern electrical raceway.



KEY-CONTROL IS THE NEWEST ADVANCE IN SCHOOL LOCKERS. Republic's Berger Division offers the exclusive key feature that eliminates handle noise in busy corridors, assures full-time locking. The key is the handle, so students carry their locker handles on their key rings. No handle maintenance expense. Locker fronts are flush and smooth. Before you specify any school locker system, see Berger's exclusive Key-Control.

REPUBLIC STEEL

World's Widest Range of Standard Steels and Steel Products

REPUBLIC STEEL CORPORATION
3110 East 45th Street
Cleveland 27, Ohio

Please send me more information on:

☐ Republic "Inch-Marked" E.M.T. ☐ Stainless Steel
☐ Key-Control Lockers ☐ Truscon Steel Windows

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State_____

K-7702



A
New Concept
IN HANGAR
DOOR DESIGN



Here's a development in door design that makes possible big savings in aircraft hangar construction . . . and provides completely weathertight protection for performance of maintenance operations on large planes.

These new Byrne Doors are designed with a fuselage aperture built into two sliding door leaves. The aperture consists of a series of movable segments constructed of aluminum and foam rubber gaskets which fit securely around the fuselage and antennae of the plane. In the installation illustrated the Byrnaperture segments are motorized but, when desired, may be manually operated. The door leaves in which the apertures are provided are interlocked and permitted to self center in order to insure equal pressure on all surfaces of the fuselage.

The many years experience gained by Byrne in design and construction of *all types* of hangar doors can be helpful to you. Our engineers are always ready to work with you.



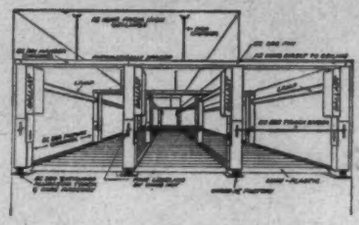
Write FOR THIS CATALOG

which provides full information on Byrne aircraft and industrial doors. Or, if you prefer, refer to it in Sweets.

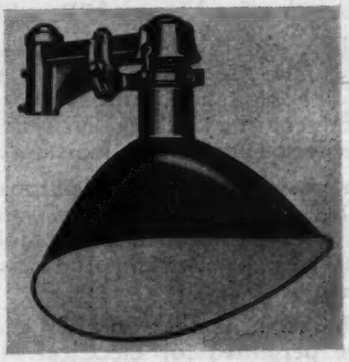
BYRNE doors, inc.

AE PRODUCTS

(Continued from page 280)



Electra Luminous Ceiling is an integrated system in which the light sources and ceiling are combined in one unit. Pre-cut tracks for the plastic panels are pre-wired and locked into a pre-punched steel structural member fastened to or suspended from the true ceiling, which serves as a light source raceway. The top half of this raceway carries one, two or three sets of sockets for mounting one, two or three banks of 8-ft lamps above an 8-ft section of track. The ballasts are mounted on the vertical raceways at the same level as the socket banks. *Luminous Ceilings Inc., 2500 W. North Ave., Chicago 47, Ill.*

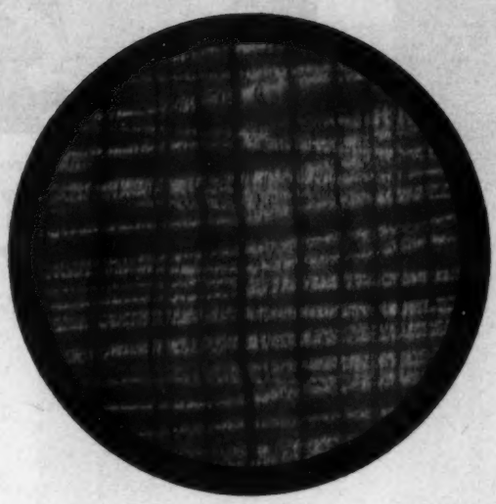


Flood Lights. An incandescent open flood-light fixture of heavy-gauge ingot iron, porcelain enameled green outside, white inside, is designed for horizontal distribution of light for service stations, driveways and billboards. *Electro Silv-A-King Corp., 1535 S. Paulina St., Chicago 8, Ill.*



Plastic Fluorescent Lighting Fixture designed for schools, offices and stores features a one-piece all plastic shielding. Known as the Scott line, it has a light efficiency of 89.8 per cent and is easy to maintain. *Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.*

(Continued on page 286)





Teak!

FOR WALL PANELING

The King of Woods—you cannot specify a finer, richer, more beautiful paneling than Teak.

We have 325 different grain patterns of rare woods available in our architectural portfolio—the most extensive in the world—including Rosewood, Harewood, English Brown Oak, Satinwood, Butternut.

Include in your design these magnificent veneers. Consult our specialists.

CHESTER B.
STEM Inc.
785 Grant Line Road, New Albany, Indiana

SEND FOR YOUR FREE BROCHURE TODAY!

CHESTER B. STEM, INC.
785 Grant Line Road, New Albany, Indiana

☐ Send representative immediately
☐ Send brochure on Teak

Name_____

Address_____

City and Zone_____ **State**_____



Protect Your Job

with LUCKE

Leakproof TUB HANGERS!

It's so easy to protect the reputation of an entire job when you permanently solve the problem of water seepage around tub rims. You can do this, so easily, with LUCKE Leakproof Tub Hangers. At the same time you solve many other problems. Take a look at the solutions listed below. All the new Statler Hotel bathtub installations are being safeguarded with LUCKE Leakproof Tub Hangers.



1. Seals rim permanently against water seepage.
2. Tub is easily levelled with Lucke Tub Hangers.
3. Equal support on all studs . . . eliminates strains . . . prevents sagging.
4. Perforations on upper part of hanger form base for wall material.
5. No unsightly cracks occur at tub rim to harbor dirt, grease and germs.

Excellent for masonry and all types of wall construction.



THE LUCKE LEAKPROOF TUB HANGER

Write for complete information.

WILLIAM B. LUCKE, INC.
WILMETTE, ILLINOIS

A·E PRODUCTS

(*Continued from page 284*)



Plastic Brick and Stone Reproductions in 2- by 4-ft rigid vinyl plastic sheets are formed into dimensional brick and stone patterns. They are reportedly easy to apply as wall covering. *Nat'l Vacuum Molding Corp., 923 Old Nepperhan Ave., Yonkers, N. Y.*



Stacking Chairs which fit together for either vertical or horizontal storage have frames of high carbon alloy steel with a satin-black finish and seats and backs of molded birch plywood. Dimensions of the Tandemstacker No. 130 are 19 by 19 by 30 in. *Allan Gould Designs, Inc., 166 Lexington Ave., New York, N. Y.*



Precision T-Square. The *Align-O-Matic*, a new development of the T-square which gives the user free use of both hands, was developed in an architect's office in Durham, N. C. The Plexiglas head snaps on and off the aluminum guide and is held in alignment against the guide by radial ball bearings. The guide can be fastened to any board regardless of thickness. The blade has a phenolic plastic core and clear acrylic edges which will not discolor or craze. *Align-O-Matic, P. O. Box 2001, Durham, N. C.*

(*Continued on page 290*)

Vina-Lux .. a finer flooring for superior schools



Jessen, Jessen, Millhouse & Greeven, Architects, Austin, Texas



Better schools need better floors. Vina-Lux is designed to meet that requirement. It is an effective answer to the need for a better performing resilient floor for modern school houses.

Vina-Lux combines the virtues of vinyl resin and asbestos fiber. The result is an exceptionally smooth-surfaced floor with a remarkable resistance to abrasive wear in fresh new light-reflecting colors. Its vinyl resin binder makes it greaseproof and highly resistant to acids and alkalis. It is quiet and safe to walk and work on and its easy-cleanability is a boon to school custodians.

We honestly believe Vina-Lux will out-perform any other type of resilient flooring in school houses on a dollar and cents basis. Over a period of years it costs less per square foot per year.

School folks are mighty enthusiastic about this new, more efficient school flooring. Get all the facts about Vina-Lux for school use — ask us for a copy of the new Vina-Lux brochure — complete with color chart and factual data.

Vina-Lux®

REINFORCED VINYL TILE

AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.
FROST BANK BUILDING • SAN ANTONIO, TEXAS
MAKERS OF VINA-LUX • AZROCK • DURACO • AZPHLEX

WHITE *is so much more effective!*

Trinity white—the *whitest* white cement—is a true portland. The gleaming sparkling whiteness as mass or contrast increases the stature of good design. Use it for architectural concrete units; stucco; terrazzo; and wherever high light-reflection is indicated. Trinity white meets all Federal and ASTM specifications.



A Product of GENERAL PORTLAND CEMENT CO. • Chicago • Dallas • Chattanooga • Tampa • Los Angeles



the new smithcraft troffer is

RECESSED LIGHTING AT ITS BEST

in clean, trim appearance . . . and in mechanics, too!

Twelve important features of the new Smithcraft Troffer illustrate the completeness of design development that went into this new outstanding recessed lighting. Important among the twelve features for architects and engineers is the fact that they can now create absolutely clean, trim, architectural lighting effects without the disturbing blemishes caused by exposed hinges, locks, fasteners or screws. The ceiling is uncluttered . . . the final lighting effect is crisp, modern and efficient.

The new line of Smithcraft Troffers is truly complete, offering troffers with or without integral trim flange, with the widest choice of shielding media and adaptable to virtually any ceiling construction.



Specify Smithcraft for superior appearance, unsurpassed lighting performance together with ease and economy of installation.

Complete details are offered on the new Smithcraft 12" wide troffers. This new Smithcraft Troffer book also gives complete information on the new Smithcraft line of 2-foot wide troffers — available with many types of shielding media and for many different types of ceiling construction.

1. No visible catches, latches, hinges, bolts or screws.
2. Door frame containing glass, lens or plastic opens or closes by simple pressure upwards with the new exclusive Smithcraft Pressure-Catch. (Patents pending) To remove door-frame simply lift off without tools or loose parts.
3. In louvered units, louvers hinge from either side, close by simple pressure upwards, and are removed without tools or loose parts. (Patent #2,559,640)
4. Architecturally precise modules for exactly 12" openings — perfectly straight, trim, in-line rows, whether mounted individually or in continuous rows.
5. No light leaks.
6. Slimly-designed glass frame for better appearance and better efficiency.
7. Wide selection of shielding media; spot boxes, pattern lighting, etc., for flexibility of design.
8. Troffers are available with integral trim flange for finishing the ceiling opening, if required.
9. Adaptability to today's ceilings is virtually universal. Simple clips adapt troffer to all of today's most common ceilings; simple provision for adaptability to all others. The new Smithcraft Troffer-in-plaster frame method assures perfectly square openings.
10. From start to finish only tool required is a screwdriver.
11. No exact positioning required, maximum simple adjustability at every critical point, with the Smithcraft Yoke-Aligner Hanger (Patent #2,597,875, other patents pending)
12. Minimum number of parts and assembly on the job.

Smithcraft LIGHTING DIVISION, CHELSEA 50, MASS. *America's finest recessed lighting*

For cost-cutting answers to any door need, see these

TWO NEW CATALOGS!



Kinnear Steel Rolling Doors
With the coiling upward action of the interlocking steel-slat curtain, *originated* by Kinnear

Kinnear Rolling Fire Doors
All-steel "Akbar" Doors, famous for safety features and labeled by Underwriters Laboratories, Inc.

Kinnear Steel Rolling Grilles
A protective, attractive openwork of steel bars and links—admits light, air and vision

Kinnear Motor Operators
Special rugged motors for time-saving push-button door operation

Kinnear Rol-TOP Doors
Sectional upward-acting wood or all-steel doors with any number of panels for glass



KINNEAR ROLLING DOORS — *Saving Ways in Doorways*

Write for Your Copies Today

FACTORIES IN COLUMBUS, OHIO and SAN FRANCISCO, CALIFORNIA

The Kinnear Manufacturing Co.
1860-80 Fields Avenue, Columbus 16, Ohio
Please send new Kinnear door catalogs to:

Name_____ Title_____

Firm_____

Street_____

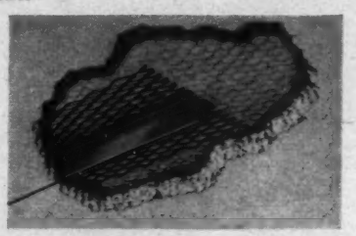
City_____ Zone_____ State_____

AE PRODUCTS

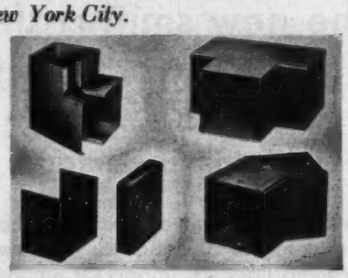
(*Continued from page 286*)



Wall Thermostat. A heavy-duty combination thermostat No. 801-A3 will control both heating and air conditioning equipment of all types. With a temperature range between 64 F and 80 F, the thermostat is connected to a manually operated summer-winter switch to provide the change between heating and cooling. The unit mounts directly on a standard 2- by 3-in. switch box. *Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Box 400, Knoxville, Tenn.*

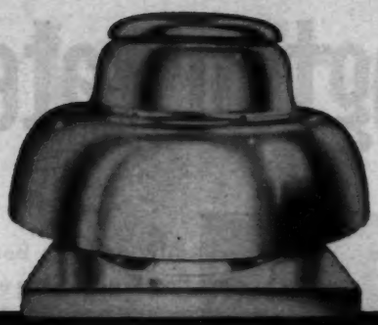


Expansion Joint of 26-gauge galvanized steel has been designed to prevent or reduce cracking of exterior stucco or acoustical plaster ceilings. Available in 10-ft lengths with either ½-in. or ⅞-in. grounds. *Penn Metal Co., Inc., New York City.*



Flangeless Wireway Fittings designed to allow maximum flexibility in meeting wiring layout requirements are available in a line which includes T fittings, 90- and 45-deg elbows, pull boxes, closing plates, U connectors and panel adapters. Formed from heavy code gauge steel and finished in baked gray enamel, they are produced in sizes for use with 2½- by 2½-in., 4- by 4-in., 4- by 6-in., 6- by 6-in. and 8- by 8-in. Keystone flangeless wireways. Catalog available. *Keystone Mfg. Co., 23328 Sherwood Rd., Center Line (Detroit), Mich.*

(*Continued on page 294*)



Jenn-Air Belt Drive Centrifugal Roof Exhauster. Capacity up to 12,000 CFM. Now for the first time high air discharge capacity is available from low contour exhauster design.

WHY is a Jenn-Air versatile



There's one word that sums up the scores of advantages offered by Jenn-Air Exhausters . . . it is "versatile."

VERSATILE—because Jenn Air offers dual ventilation with a unit for every need; wall exhausters if the area to ventilate is flush to an outside wall . . . roof exhausters for heavy air load movement.

VERSATILE—because Jenn-Air saves on costs with short ducts for wall installations. No platforms, louvres or penthouses necessary for roof installation.

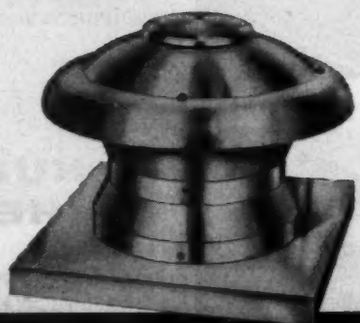
VERSATILE—because service cost is cut—simplified design using nationally known motors—grease packed—full ball bearing—designed for 10 years service without regreasing—easiest of all to disassemble and clean.

VERSATILE—because a nationwide network of sales engineering offices stands ready to serve you no matter what your need—from a small replacement part to counsel on a major installation.

VERSATILE—because Jenn-Air exclusive low contour design means adaptability to modern architectural structures—neat appearance—no unsightly intrusion to roof line.



Wall Exhausters—architecturally sculptured button design—spots ventilation control



Low contour Roof Exhausters blend with architectural design of building

JENN-AIR PRODUCTS COMPANY, INC.

Architects & Building Building ● Indianapolis 4, Indiana

JENN-AIR PRODUCTS COMPANY, INCORPORATED
Architects & Builders Building A R
Indianapolis 4, Indiana

Please rush me Catalogs 53-B and 55-A.

Name_____

Company_____

Address_____

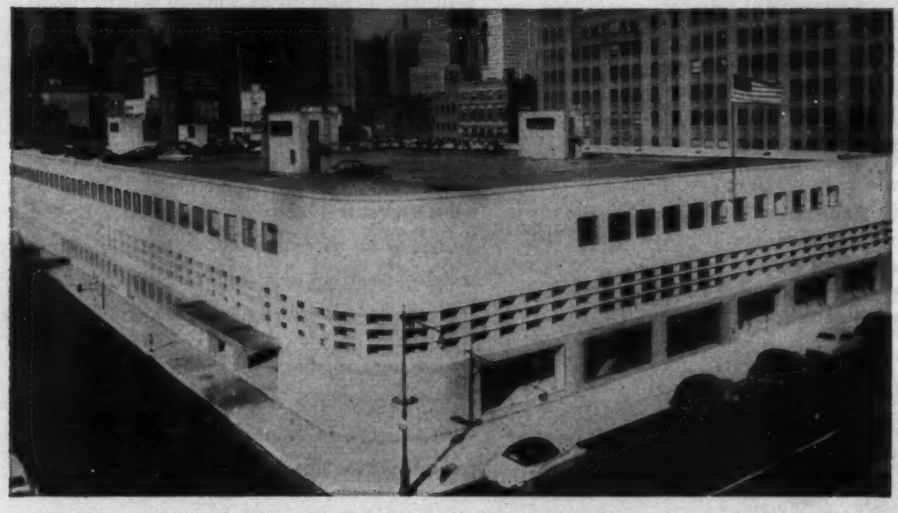
City_____ State_____

WHY Worthington rates so



UNUSUAL DESIGN

Completely sheathed in glass, the new Manufacturers Trust Building in New York posed an unusual air conditioning problem. The job is taken in stride by a modern Worthington central station system consisting of two 150-ton packaged water chillers.



HEAVY TRAFFIC

Keeping more than 12,000 people cool daily at New York City's new airlines terminal is a tough job. It's handled by a 315-ton Worthington centrifugal refrigeration system, together with Worthington air handling equipment and pumps.

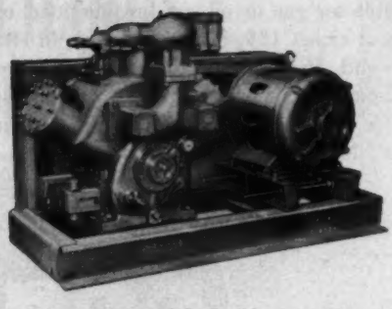


HUMID HEAT

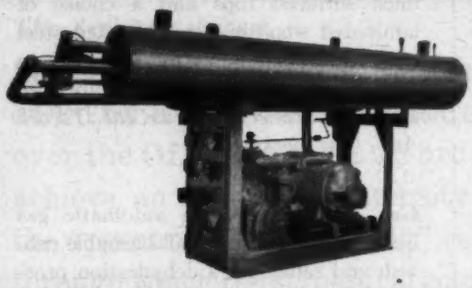
The Sterling, Miami Beach's newest oceanfront hotel, has *everything* but humid heat! An all-Worthington air conditioning system cools 142 rooms and 186,000 cubic feet of dining room and lobby space. Basic unit is a 60-ton Worthington "million-dollar" Freon compressor. Worthington packaged units are also spotted at key points.

smany key air conditioning jobs

There are good reasons why unusual design, traffic or climate conditions can't trip up a Worthington dealer. He handles the most complete line of central station equipment in the industry. And, he's backed by Worthington's 70 years of specialized air conditioning experience. With assets like these, he's ready to take on *any* air conditioning job! For more details about the complete line, write Worthington Corporation, Air Conditioning and Refrigeration Division, Sect. A.5.57-R, Harrison, New Jersey.



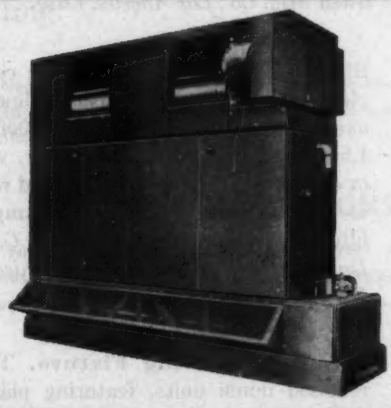
NEW FREON COMPRESSOR. Marked by sturdy construction and higher operating speeds, the new Freon compressor line ranges from 3-150 hp. Scientific balancing of rotating and reciprocating elements assures quiet, vibration-free operation.



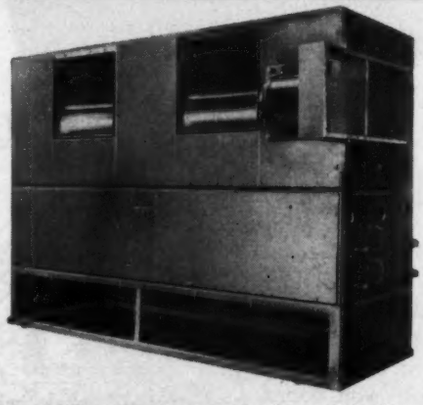
COMPACT LIQUID CHILLERS, in sizes up to 200 hp, provide dependable air conditioning where chilled water is used as the cooling medium. Factory assembled units show trim design; require minimum floor space. "Hearts" of these units are Worthington Freon Compressors.



INDUCTION CIRCULATOR. Room air conditioning unit operating on high-pressure air induction principle. Used for perimeter cooling and heating of multi-story buildings. Absence of moving parts means long life, quiet operation. 75 to 1000 CFM total air distribution.



EVAPORATIVE UNITS are designed for application where water is high in cost or temperature. Units reduce water consumption by 90% or more; do not require cooling towers. Can be adapted for indoor or outdoor use. Six sizes range from 10 to 150 tons.



AIR HANDLING UNITS for remote air conditioning. Cooling coils available for direct expansion Freon-12, Freon-22, or chilled water. Floor and ceiling mounted units are functionally designed for easy installation and operation. 1,400 to 13,500 CFM.

A5-57R

WORTHINGTON

CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME

(Continued from page 290)

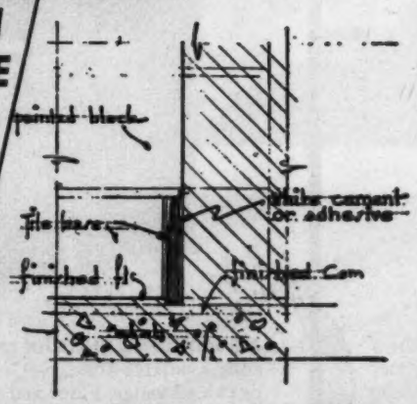
Automatic Wall Furnace. A decorative automatic wall furnace with arrangement for conversion to a central heating unit is available for gas or oil, fits into a wall opening or closet 17½-in. wide, 20½-in. deep and 56-in. high. The 55,000 Btu heat output is powerful enough to heat 4 or 5 rooms. *International Oil Burner Co., 3800 Park Ave., St. Louis 10, Mo.*

Residential Service Entrance Device. A residential service entrance device that combines a meter socket and circuit breaker load center in a single unit is available in either semi-flush or surface raintight enclosures. The combination units provide straight-in wiring at connection terminals with silverplated copper for all current carrying parts. *General Electric, Plainville, Conn.*



DIRECT ADHESION ROMANY BASE TILE

Now it is possible to repeat the window sill tile color in school rooms with this new ROMANY B-58 Base Tile. Available in all Buff Body Colors and has a flat back for easy application. Can be economically installed with adhesive or by cement method, direct to the wall block, plaster or wall board. Provides a durable area that is kick proof and mop proof and assures an attractive appearance.



Every Architect should have our Sample Tile Chart No. 6. It's free.

UNITED STATES CERAMIC TILE COMPANY

Member: Tile Council of America and Producers' Council, Inc.

217-H FOURTH ST., N.E., CANTON 2, OHIO

Hardware for Doorframes. A hardware design for aluminum sliding glass doorframes allows increased grip space between handle and vent jamb when vent is in closed position. The lock stile has been strengthened to permit greater door heights. *Frank B. Miller Mfg. Co., Inc., 3216 Valhalla Dr., Burbank, Calif.*

Folding Doors. Folding doors with a vinyl covering are available for any size opening up to 12-ft high and 25-ft wide in single or paired doors. The top of the door is supported at each fold by two nylon wheels, operating on a rolled steel track, covered by a wood cornice. *Bolta Products, Lawrence, Mass.*

Hospital Furniture. A basic group of hospital furniture consisting of a bed, over-bed table, bedside cabinet and bedside chair are made of wood with Formica surfaced tops and a choice of laminated wood or plastic coated steel legs. Additional items for semi-private and private accommodations are also available. *Thonet Industries, Inc., 1 Park Ave., New York City.*

Gas Incinerator. An automatic gas incinerator disposes of all burnable rubbish and refuse by a dehydration process, eliminating smoke and noxious odors. A flame-monitor maintains a continuous flame in the 3-ft by 3-ft incinerator which is available in either white or aqua enamel finish. *Waste King, Given Mfg. Co., Los Angeles, Calif.*

Blower Type Heating Unit. A complete blower type unit heating line is available in 170 ratings from 125,000 to 1,500,000 Btu. Units can be floor, wall or ceiling mounted and can be used with or without ducts, with by-pass damper, filter section and mixing dampers. *C. A. Dunham Co., 400 W. Madison, Chicago, Ill.*

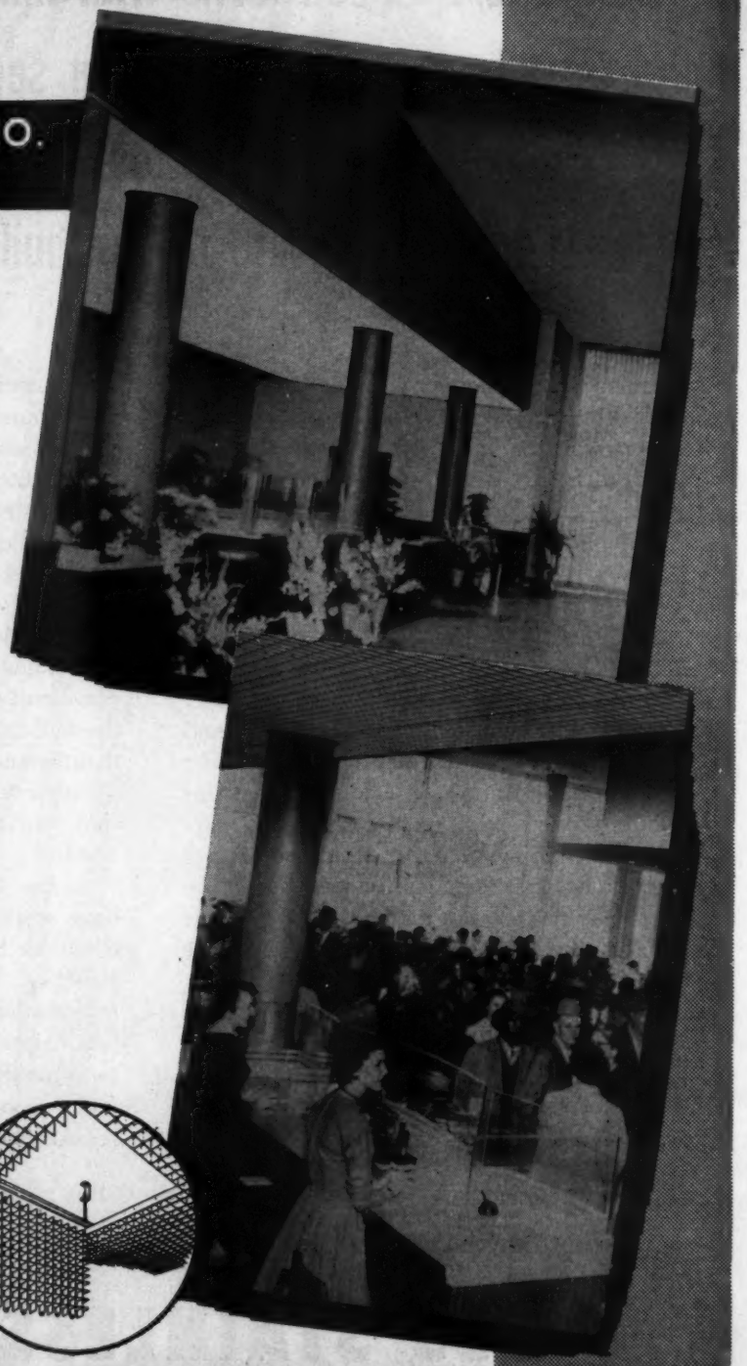
Circular Lighting Fixture. Two recessed dome units, featuring plastic diffusing panels for low brightness, have detachable yoke construction, separate plaster ring and built-in splice box. *Kurt Versen Co., Englewood, N. J.*

Plastic Wall Tile. A dull-finished plastic wall tile is available in a variety of pastel shades. It comes in 4¼-in. by 4¼-in. field pieces and in a large selection of trims. *Artcrest Plastics Co., Inc., 255 W. 79th St., Chicago 20.*

(Continued on page 298)

banks give

NEO-RAY LOUVRED CEILINGS CREDIT FOR CORRECT LIGHTING



MINDEN BANK & TRUST CO.
MINDEN, LOUISIANA

Architect: Van Os & Flaxman
Shreveport, La.

The Architect writes:

"In designing this bank, the solution called for a somewhat dramatic effect over the Officer's Area. In order to achieve an even light intensity and the appeaance of a "floating" ceiling through which the structural columns would disappear, we believe we have satisfied all of these requirements by the use of the Neo-Ray louvred ceiling."

The Neo-Ray Louvred Ceiling specified in the above job has hinged sections, continuous unbroken louvre pattern in all directions.

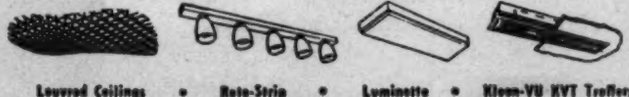
SPECIAL LOUVRE DESIGNS?

Can Neo-Ray Louvred Ceilings fit into your plans? Our engineering staff is ready to assist in the creation and development of any special louvred ceiling designs.

Send for NEW LOUVRED CEILING catalog No. 544

See our catalog in Sweet's Architectural File sec. 30a/NE

MANUFACTURERS OF LIGHTING FIXTURES INCLUDING:



Louvred Ceilings • Roto-Strip • Luminette • Kleen-VU KVT Troffers

NEO-RAY PRODUCTS, Inc.
315 East 22nd St. • New York 10, N. Y.

Here's a material for curtain w

. . . that has high corrosion resistance
. . . that keeps its good looks with minimum cleaning
. . . that can be safely used in thin sections
. . . that can meet 2-side fire test requirements
. . . that's good for the life of the building

IF FIRST COST were the only consideration in planning a modern building, many of today's construction practices would be out the window. But first cost is only part of the picture; it's only one of the factors that determine overall cost for the life of the building.

That's particularly true of materials used for curtain-wall construction. There are materials with a lower original cost than Stainless Steel. But in the long run, the advantages of Stainless more than offset any difference. Here's why:

Stainless Steel has proved its ability to stand up in the face of atmospheric corrosion. The Empire State Building's Stainless trim has been in service a quarter of a century; there's no evidence of corrosion. Industrial buildings have given satisfactory service even longer. Besides, Stainless is the material to which the process industries turn when they have a severe corrosion problem.

Stainless Steel is attractive and decorative and it will remain that way through the life of the building. Cleaning—simply for the sake of appearance—is infrequent and easy.

Because of Stainless Steel's inherent strength and because no allowance need be made for the effect of corrosion, thin sections can be used. This lighter weight translates itself into important savings in building construction.

Stainless Steel has a high melting point, and when used with a proper insulating core, will meet fire test requirements from both inside and outside the building.

And finally, Stainless Steel is a material you can count on over the entire projected life of the building. There are no replacements and maintenance is at a minimum.

For true economy in curtain-wall construction, you'll find that nothing equals Stainless Steel.

As the producer of USS Stainless Steel, we have worked closely with the fabricators of Stainless Steel panels for curtain-wall construction. We'll be glad to send you further information and put you in touch with these fabricators. Write to United States Steel Corporation, Room 4920, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

See The United States Steel Hour. It's a full-hour TV program presented every other week by United States Steel. Consult your local newspaper for time and station.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO • NATIONAL TUBE DIVISION, PITTSBURGH
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS STAINLESS STEEL

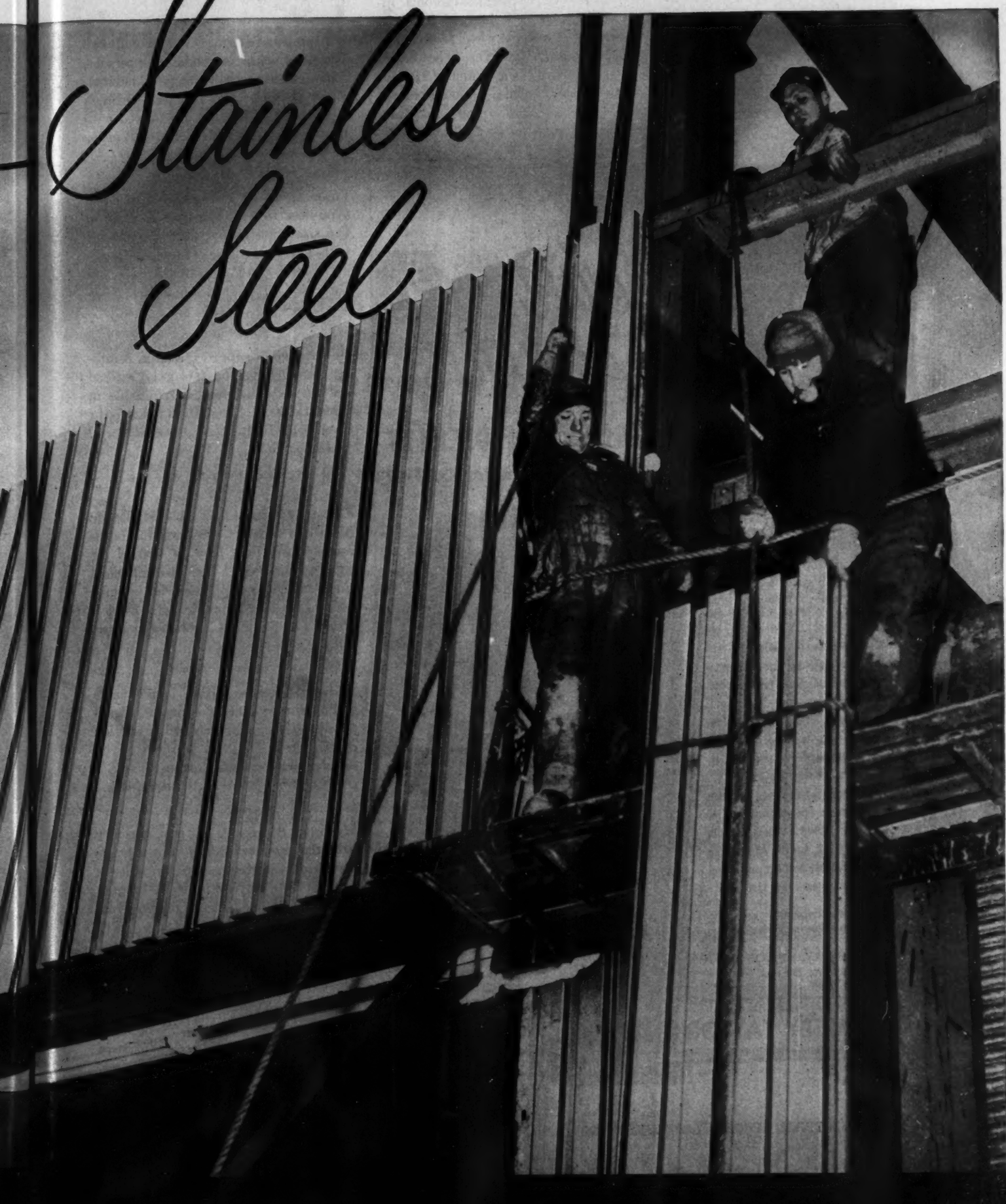
SHEETS • STRIP • PLATES • BARS • BILLETS — USS — PIPE • TUBES • WIRE • SPECIAL SECTIONS

5-209

UNITED STATES STEEL

n wall construction

Stainless Steel



AE PRODUCTS

(Continued from page 294)

Gate Latch Lock. A gate latch lock assembly for use on single acting gates and doors has positive slide bolt action and provides for use of padlock where desired. All parts, except the phosphor bronze spring, are made of heavy gauge wrought steel with black baked enamel finish. *Arrowsmith Tool and Die Corp., Dept. AR, 9700 Bellanca Ave., Los Angeles 45, Calif.*

Ceiling Light and Ventilator. A ceiling light and ventilator combination for use inside or outside bathrooms incorporates two 75 w lamps located on either side of a single wheel blower unit which exhausts 100 cfm. The entire unit measures 13⅞-in. wide by 7³⁄₁₆-in. deep by 8-in. high and is mounted flush in the ceiling. *Trade-Wind Motorfans, Inc., 755 Paramount Blvd., Rivera, Calif.*

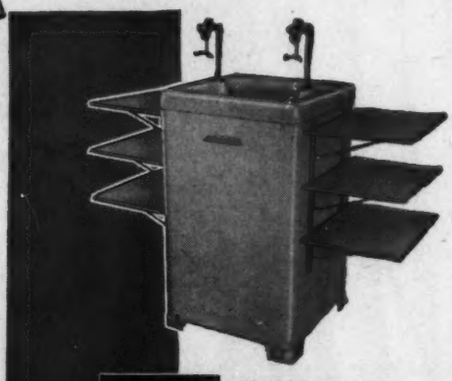
schools

serve more pupils

MORE EFFICIENTLY

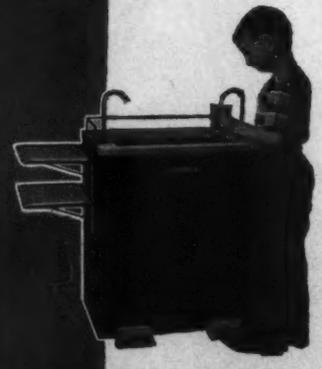
with Halsey Taylor Coolers





CAFETERIA COOLER

with splash-proof cast-iron porcelain enameled top, chromium-plated trim, push-back glass fillers.



LO-LEVEL COOLER

...just the right height for "the small fry." Foot-pedal operation promotes convenience and speeds serving.

Active, impatient pupils... boundless delay and confusion in the cafeteria ... unless it is well organized! One of the best methods of expediting servings is to install Halsey Taylor dependable, efficient coolers.

For these modern coolers are designed for the exigencies of every-day school service, built to perform dependably day after day and to provide positive maintenance economy!

They are available in many types, some with two projectors, others with two glass-fillers, or in models with a combination of both, and with foot-operated pedals if desired. All have the famous Halsey Taylor automatic stream control and two-stream projector.

Ask for latest literature, describing coolers as well as our complete line of fountains.

The Halsey W. Taylor Co.
WARREN, OHIO

HALSEY TAYLOR

AS-41

Roofing Aggregate. A white roofing aggregate of a dustfree, hard, nonporous marble limestone, sized to meet bonded specifications, makes possible a white built-up roof with high reflective properties. *Black White Limestone Co., Quincy, Ill.*

Dining Furniture. A table and two benches which accommodate four persons, folds against the wall into a neat cabinet. Built of steel with baked-on enamel, the table and benches are topped with heat-resisting plastic. *Anco Window Corp., Dallas, Texas.*

Floor to Floor Conveyor. The *pallet* type floor to floor conveyor is made in two sizes, 500 lb and 2000 lb capacity with a steel platform. It includes automatic stop, top and bottom. *The Wehle Conveyor Co., 25-27 Washington St., Binghampton, N. Y.*

Decorative Lumber Planking. A lumber planking that suggests ocean-washed driftwood ⅝-in. thick, is available in three widths, 6, 8 and 10 in., in lengths from 4 to 10 ft. *U.S. Plywood Corp., Weldwood Bldg., 55 W. 44th St., New York 36.*

Electric Heater. *Wesix* 15-TH electric bathroom heater is designed for bathrooms where heat may be wanted for short periods only. A built-in mechanical time switch control may be set for periods up to one hour. *Wesix Electric Heater Co., 390 First St., San Francisco, Calif.*

Sliding Window Unit. A removable sliding window unit incorporates *Alumaflex Weatherstrip* for easy roll-out action of the sash. The unit is removed by simply pressing sash upward. *The Silcrest Co., 100 Thomas St., Wausau, Wis.*

Masonry Stone. A low-cost masonry stone designed specifically for constructing garden, terrace or patio walls is available in 6-in. by 6-in. by 16-in. gray or tan slumpstone. *General Concrete Products, Inc., Los Angeles, Calif.*

Decorative Panels. Plastic laminate panels 12-ft long by 51-in. wide, ⅛-in. or ³⁄₁₆-in. thick, are available in 46 patterns and colors, including marbles and wood grains. *Consoweld Corp., Wisconsin Rapids, Wis.*

(Continued on page 302)

NOW...

the greatest drain development in years!

Josam

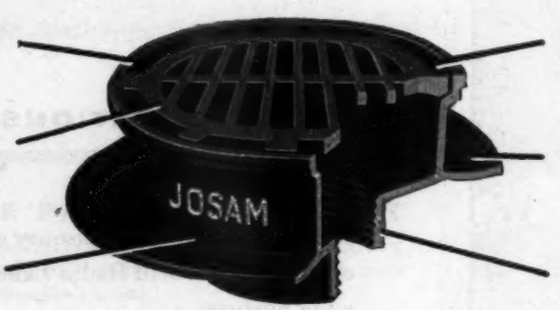
SUPER-FLO

FLOOR DRAINS

(PATENTED)



Through Josam pioneering, a great new advancement in drains is presented to the industry



Perimeter slots increase free area of top and permit greatly increased flow rate (GPM).

Standardized bodies permit interchangeability of grates, sediment bucket, round or square brass tops, etc.

Size and number of weepholes provide positive double drainage action.

Constant flushing is obtained by drainage flowing over inside surface of body.

Flat surface of shallow sloped flange eliminates bending or pre-forming water-proofing.

Female threaded outlet, standard. Inside caulk, optional.

GREATER FLOW. Josam SUPER-FLO Floor Drains are designed with perimeter slots in the grate which increase the free drainage area of the top and permit greater flow into the drain. In SUPER-FLO Floor Drains, waste water enters the drain at *the very edge* of the drain top instead of flowing over the wide rim of conventional drains before it reaches the grate openings. Because of this, water friction loss in Josam SUPER-FLO Drains is greatly reduced, and the flow rate (GPM) into the drain is greater than the flow rate in standard drains of the same or larger size top.

SAVINGS IN COST. Because of the increased flow rate in Josam SUPER-FLO Drains, a smaller top size Josam SUPER-FLO Drain can be installed to service the same drainage condition as a larger top size standard floor drain.

GREATER SANITATION. Since waste water enters Josam SUPER-FLO Drains through slots at the very edge of the rim, the water flows over the inside surface of the drain body, thereby constantly flushing the inside walls and keeping the drain body free from an accumulation of foreign deposits.

GREATER INTERCHANGEABILITY. Josam SUPER-FLO drains permit various styles of grates and tops, buckets and other features to be added or substituted even after drain is on the job. This also effects an economy in case of alterations in specifications or future requirements because of change in operations.

Josam SUPER-FLO Floor Drains set a new standard for quality and service wherever drains will be specified and used. Get the complete details by sending coupon below.

JOSAM MANUFACTURING COMPANY

General Offices and Manufacturing Division, Michigan City, Indiana

Representatives in All Principal Cities

Josam

West Coast Distributor

JOSAM PACIFIC CO., San Francisco, Calif.

Canadian Manufacturers

JOSAM CANADA LIMITED, Toronto, Canada

JOSAM MANUFACTURING CO.
Dept. AR, Michigan City, Indiana
Please send 8 page Booklet on new Josam SUPER-FLO Floor Drains

Firm ..... Business .....

By .....

Address .....

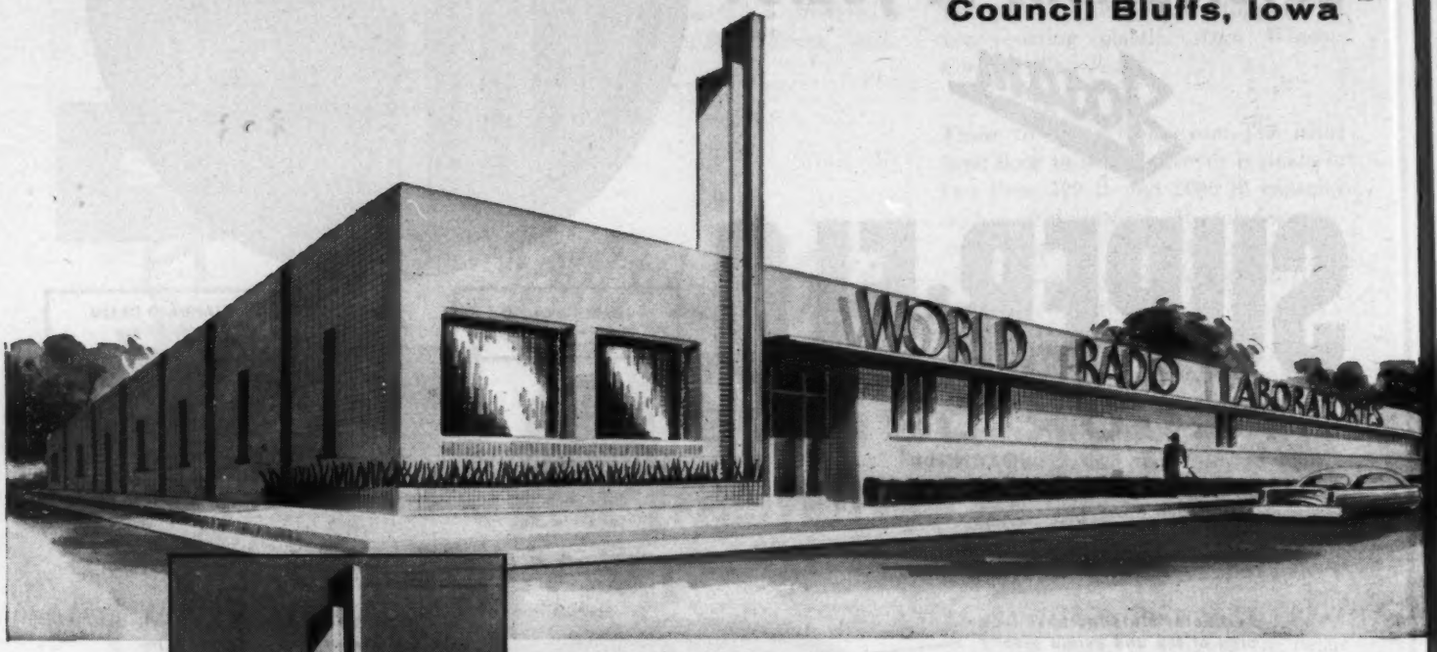
City ..... Zone ..... State .....

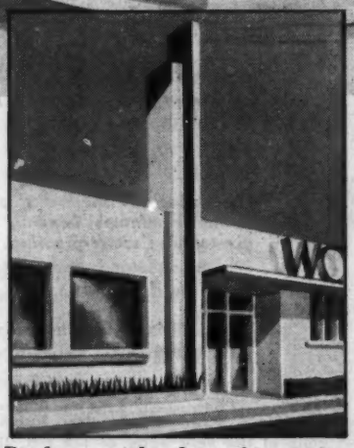
Westinghouse Salutes

An Architectural Achievement

New Headquarters of World Radio Laboratories

Council Bluffs, Iowa





By day or night, the striking unity of sign and lighting effects highlights "The World's Most Personalized Radio Supply House." Located on all transcontinental highways through the city, the site has more than an acre of parking space for customers, plus room for future expansion.

CONGRATULATIONS TO ARCHITECT *Robert C. Robinson*

His design for this all-masonry and steel building provides most efficient operation of World Radio Laboratories' internationally known, world-wide business.

30,000 square feet of air conditioned floor space — on a single level — house an electronics super-mart, hi-fi, an operating ham radio shack, and business offices. There are also receiving, manufacturing and shipping areas with over two miles of stock shelves. Employees have their own lunch room with kitchen facilities.

To complement this plan for progressive efficiency and comfort, architect Robinson naturally specified Westinghouse Water Coolers.



Architect ROBERT C. ROBINSON made sure with

Westinghouse Water Coolers – specified by an ever-increasing number of architects and construction engineers throughout the country. And, to continue to merit this approval, Westinghouse builds even greater dependability into every new water cooler.

Leak Proof Water Valve – The new solenoid water valve has no stem packing to leak, no moving parts to wear out. The entire water system is completely sealed in . . . for years of maintenance-free service. Automatic Stream Height Regulator assures no spurt, no splash, no dribble – regardless of changes in water pressure.

Dual Electric Control – Only Westinghouse offers the convenience of both finger tip and toe tip bubbler control at no extra cost . . . with electrically operated solenoid water valve that ends valve stem packing and leaks and reduces maintenance costs.

Full Line – 13 coolers to choose from, with capacities from 1 to 20 gallons in bottle and pressure types, including compartment, air cooled, water cooled and explosion-proof models, all distinctively styled with polished metal trim, attractive silver-gray hammered finish and capped with a sanitary stainless steel top. And *all* are backed by the famous Westinghouse 5-Year Guarantee Plan.



FREE WESTINGHOUSE PAY-WAY COMPUTER

The Westinghouse Pay-Way Plan spotlights a hidden drain on productivity, and *profit!* Regardless of the type of firm you have – factory, office, store – this Plan shows you how to *stop* needless waste.

To determine *your* savings under the Pay-Way Plan, Westinghouse offers this handy, FREE Computer. Call your Westinghouse Water Cooler Distributor today. He's listed in the Yellow Pages of your telephone directory. Or drop us a line!



YOU CAN BE SURE...IF IT'S **Westinghouse**

WESTINGHOUSE ELECTRIC CORPORATION

Electric Appliance Division • Springfield 2, Mass.



WSE8B
8-Gallon
Static Air Cooled
Explosion-Proof



WWE14B
14-Gallon
Water Cooled
Explosion-Proof



WSBW-2
2-Gallon
Home Water Cooler



WSC2
Compartment
Pressure Cooler



WSBC1
Compartment
Bottle Cooler

A|E PRODUCTS

(Continued from page 298)

Filing Unit. A system for filing and storing templates, patterns, gaskets and flat tools contains 24 36-in. by 80-in. numbered sliding panels. Each panel is suspended on rollers operating on roll-formed track. The unit, which has a capacity of 2880 sq ft, features a self-contained desk which folds back into the unit when not in use. *DeLuxe Metal Furniture Co., 306 Struthers St., Warren, Pa.*

Packaged Water Coolers. Ready-to-operate packaged units for cooling process water and low viscosity liquids have been designed for application in the food processing industry, bakeries and other industries where a large volume of water at low temperature is required. The cast aluminum units are available with stainless steel circuits for subcooling Freons, cooling kerosene, light oils or slightly corrosive foodstuffs. Capacities cover the range from ⅓ to 10 h.p. *Heat-X, Inc., Brewster, New York.*



for a
SECURE barrier against
hydrostatic head
call for

Karnak®

WATERPROOFING PRODUCTS

Here's how the Karnak Membrane System is superior to ordinary methods of waterproofing, especially where there is danger of water seepage.



THE Karnak long-fibre-cotton cloth, which has been saturated with specially prepared asphalt, is layered, on the job, with alternate moppings of a highly refined and very ductile asphalt. The open mesh of the fabric allows the coating to penetrate and interlock the layers. This provides a firm mechanical bond that resists abrasions, cracks, settling and maintains water resistance through the life of the structure.

Karnak Fabric is non-sticking, unrolls easily to the very end . . . works faster with no waste. It is packed in sturdy corrugated cartons for protected shipping and storage. Available through waterproofing contractors, or distributors or write us for information. ***Made by Lewis Asphalt Engineering Corp., 30 Church St., New York 7, N. Y. Dept. 112***

©L.A.E. Corp.

SEE OUR CATALOG IN SWEET'S FILE

OTHER KARNAK PRODUCTS

Asphalt Roof Coatings and Cements · Asphalt Emulsions · Floor Mastic · Asphalt Paint · Aluminum Roof Coating · Wood Block Mastic · Tile Cement · Joint Filler

Bolt Spacer. A self-locking threaded bolt spacer for structure fastening can be installed without special tools. It is designed for applications where light weight and vibration resistance are important requirements. *The Delron Co., Inc., South Gate, Calif.*

Inter-Lock File. A file for tracings and blueprints is available in any desired number of individual, matching, self-contained units, each 2½-in. by 2½-in. and running to any specified length, with dove-tailed ends which interlock to form blocks of any desired size and shape. *Pack Mfg. Co., Logan, Utah.*

Auxiliary Fittings. A line of auxiliary 8-in. flanged fittings available for use with flanged square wireways are brake-formed from heavy gauge steel and feature precision-formed edges. All units are finished in grey enamel for corrosion resistance. *Keystone Mfg. Co., 23328 Sherwood Rd., Center Line, Detroit, Mich.*

Service Fittings. A line of service fittings, equipped with standard receptacles, is 3-in. high and designed for installations where height is restricted by desks and free standing equipment. The satin finished die-cast aluminum fittings are coupled with underfloor wiring systems. *Nat'l Electric Products Corp., Gateway Center, Pittsburgh, Pa.*

Plastic Luminaire. A luminaire featuring plastic sides and plastic louvers has been designed for low ceiling installations. A high transmittance of glare-free lighting is provided by egg-crate, 40 deg by 40 deg, plastic louvers. *Smithcraft Lighting Div., Chelsea 50, Mass.*

Folding Gymnasium Bleachers. The support columns of a folding gymnasium seating unit are made of steel tubing. Other features include a method of locking each seat row as it opens, eliminating the possibility of the unit creeping forward on the floor and skirtboards that slope back under the seatboards. *The Brunswick-Balke-Collender Co., 623 S. Wabash, Chicago 5, Ill.*

Thin Gas-fired Furnaces. A combination of tight casing construction, heat exchanger design and adjustable direct drive blower enables the *Coleman* thin furnace to be used with all conventional type distribution systems. Upflow and downflow models with capacities of 80,000 and 100,000 Btu input are available. *The Coleman Co., Wichita, Kan.*

(Continued on page 304)

CURTAIN WALLS

by GENERAL BRONZE



RCA Offices, Cherry Hill, N. J.
Architect: Vincent G. Kling
Contractor: Turner Construction Co.

● Our pioneering efforts in the field of curtain wall construction during the past ten years have given General Bronze a wealth of practical experience in dealing with all types of buildings and with all types of materials, — experience that can help eliminate headaches for architects and contractors, and save time and money for clients.

Whether you are thinking of curtain walls in terms of stainless steel grids, colored porcelain enamel insulated panels, and aluminum windows, — such as those used in three of the RCA Cherry Hill buildings *(one of which is shown above)*, — or panels and windows fabricated from aluminum or bronze, we offer you the benefit of our many years' experience in designing, engineering, fabricating and erection of curtain walls and windows.

As you plan new buildings, why not call in the General Bronze representative for consultation. He is anxious to be of service to you when your problems pertain to windows, spandrels, curtain walls and architectural metal work. Our catalogs are filed in Sweet's.

QUALITY APPROVED
(TYPE)

GENERAL BRONZE CORPORATION • GARDEN CITY, N. Y.

PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. ALWINTITE DIVISION—Stock-size Aluminum Windows
BRACH MFG. CO. DIVISION—Multel, T. V., Radio and Electronic Equipment. STEEL WELDMENTS, INC. DIVISION—Custom fabrication in steel and iron.



Carol—Edna—Hazel . . . did *their* warnings provide THE TIME NEEDED . . . for EVERY safeguard—EVERY precaution?

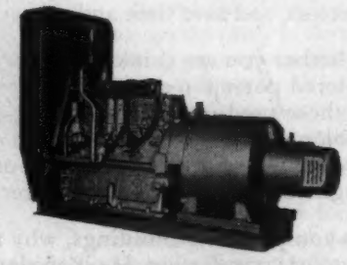
Temporary expediency *will not* guarantee essential lights and power.

That's why Architects are recommending the installation of the rugged, dependable automatic "standby power" of United States Motors Engine-Generators for schools, hospitals, prisons, banks, hotels, public buildings of every type.

In every size—for every requirement—United States Motors Corporation has built engine-generators for over 60 years to supply "continuous" or standby "emergency" power.

The complete line includes over 300 models from 300 watt hand-portables for home use, to 250 KW stationary Units for Municipalities.

Insist upon U.S. Motors standby "emergency" lights and power in all major installations. When specifications demand the unusual, United States Motors will build to your requirements. Facts, details, specifications listed in Sweet's File.



UNITED STATES MOTORS CORPORATION
LIGHT US POWER
OSHKOSH • WISCONSIN

For additional information, write:

UNITED STATES MOTORS CORPORATION
351 Nebraska Street, Oshkosh, Wisconsin

AE PRODUCTS

(Continued from page 302)



Tilting Ventilating Hood makes cleaning effortless and can even be lifted off for cleaning outdoors. The self-contained unit has a three-speed fan and light switch. The Model 239 hood comes in coppertone, baked white enamel and stainless finishes and in sizes of 30, 36, 39, 42 and 48 in. *Pryne & Co., Inc., 142 No. Towne Ave., Pomona, Calif.*



Ventilation Hood Light for illuminating the cooking area on a range is supplied as a complete unit with two light sockets, a switch and a reflector to direct the light back and down. It can be used with *Trade-Wind* hoods or adapted for use with other types of hoods. *Trade-Wind Motorfans, Inc., 7755 Paramount Blvd., Rivera, Calif.*



Kitchen Ventilating Hood finished in smooth baked white or copper enamel is equipped with an 8-in. fan and two 40-watt lamps with switches for lights and fan. The economical hood comes in 30-, 36-, 42- and 48-in. sizes. *Stanthony Corp., 5341 San Fernando Rd. West, Los Angeles 39, Calif.*

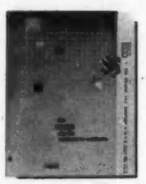
(Continued on page 308)

The only complete ceramic tile line...

MOSAIC

from America's largest ceramic floor and wall tile manufacturer!

Harmonitone & Bright Glaze wall tile
Harmonitone & Velvetex mosaics
Granitex mosaics & pavers
Formfree* glazed tile & mosaics
Everglaze tile
Carlyle quarry tile
Electrically-Conductive floor tile
Undulatile**
Faience tile
Decorated tile
Tile numerals & letters
All-Tile Accessories



In addition to the ceramic mosaics illustrated, you'll want complete data on the complete Mosaic tile line. Ask your Mosaic Representative or write The Mosaic Tile Company, Dept. 30-29, Zanesville, Ohio, for these new Mosaic tile books: (A) The Mosaic Workbook for Architects; (B) The Mosaic Tile Book of Beautiful Homes; (C) The Mosaic Products Catalog. And, our catalog is in Sweet's.

*Copyright 1951 by The Mosaic Tile Company
**Copyright 1954 by The Mosaic Tile Company

MOSAIC®

Factories, Warehouses, Showrooms from Coast to Coast

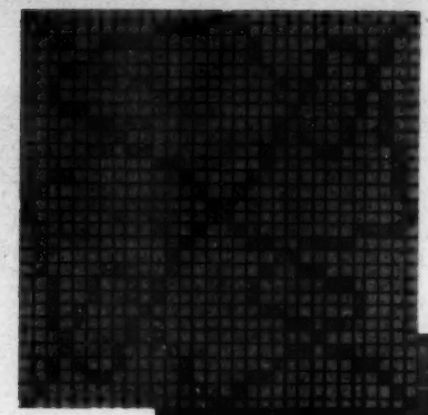
WAREHOUSES & SHOWROOMS: Atlanta, Baltimore, Boston, Chicago, Dallas, Denver, Detroit, Fresno, Greensboro, Hartford, Hempstead, L.I., N.Y., Hollywood, Little Rock, Miami, Minneapolis, New Orleans, North Hollywood, Philadelphia, Portland, Rosemead, Calif., Salt Lake City, San Diego, San Francisco, Seattle, Tampa, Washington, D. C., Zanesville. SHOWROOM: New York. REPRESENTATIVES: Buffalo, Cincinnati, Kansas City, Milwaukee, Pittsburgh. FACTORIES: Zanesville & Ironton, Ohio, Matawan, N. J., Little Rock, Ark., Corona & El Segundo, Calif.



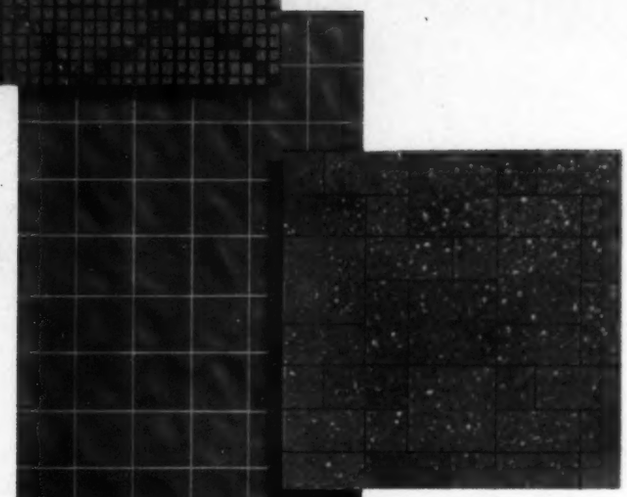
Member: Tile Council of America and The Producer's Council, Inc.

Over 5000 Tile Contractors to serve you.

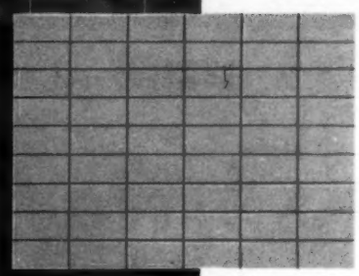




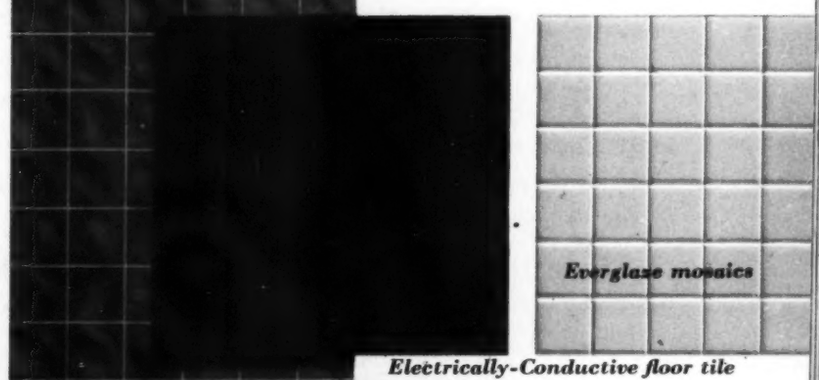
Formfree mosaics



Granitex mosaics

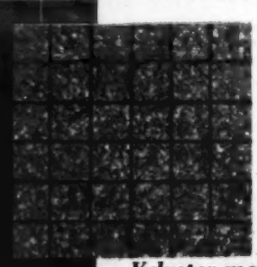


Harmonitone mosaics

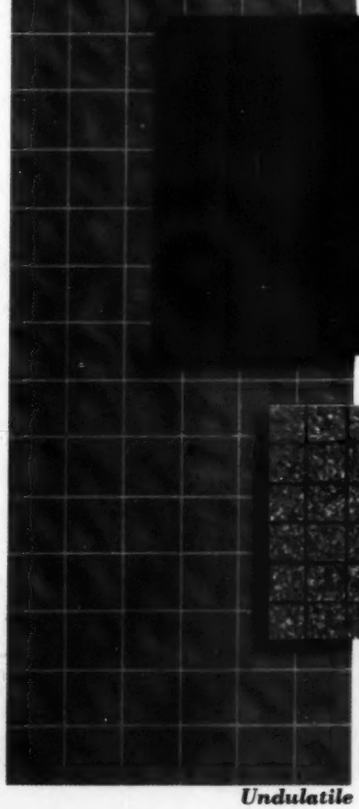


Everglaze mosaics

Electrically-Conductive floor tile



Velvetex mosaics



Undulatile





Convectors or Radiators



Heating coils in ceiling or floor or Radiant Baseboards

You may choose any type of modern heating unit for today's Hot Water System.

THRUSH Radiant Hot Water Heat

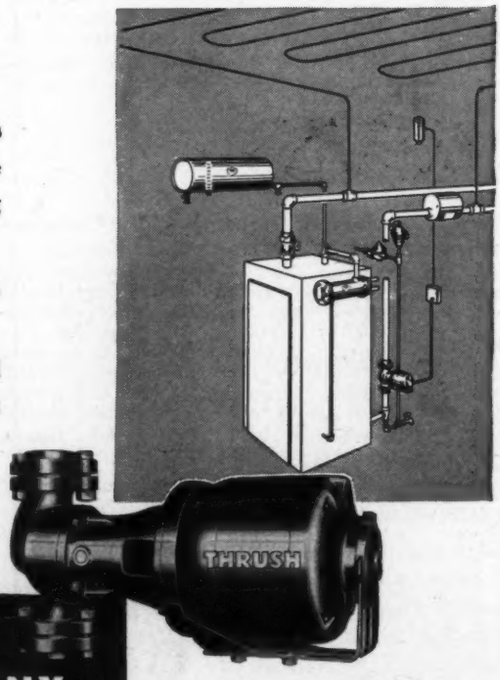
FOR EASIER SALES

HOME BUYERS prefer Hot Water Heat because it provides more uniform heating at lower cost. Builders like it too, since new developments in highly efficient units for smaller heating plants reduce installation costs materially.

Today the complete Thrush System can be installed within the budget of the smallest home. See illustration at right.

This outstanding equipment provides the most economical and completely automatic controls for radiant hot water heat offered today. Get the facts, now!

For more information please see our Catalog in Sweet's or write Department J-9 today.



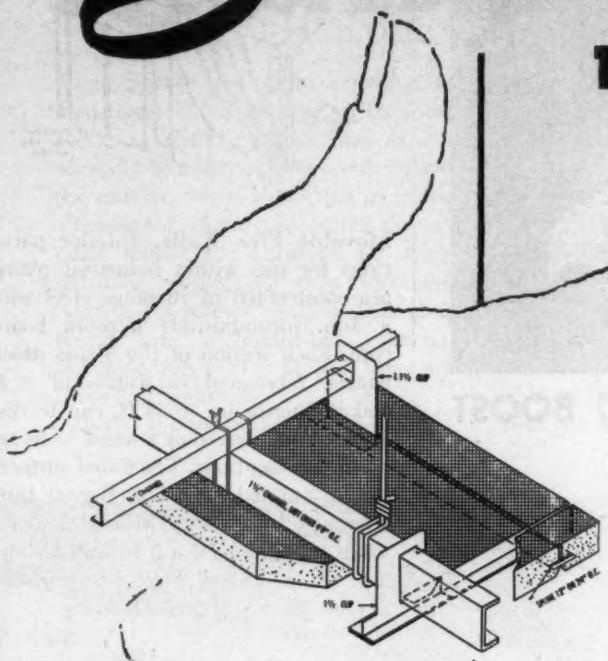
THRUSH WATER CIRCULATOR

H. A. THRUSH & COMPANY

PERU, INDIANA

Securitee

1½ SYSTEM for . . .



- ECONOMY IN PURCHASE
- EASE OF INSTALLATION
- LONG, TROUBLE-FREE SERVICE
- A TRUE AND LEVEL CEILING

In the face of rising building costs it is important that every possible economy be made, without sacrificing quality, or disturbing the safety factor. Securitee 1½ System, for the erection of acoustical tile, is the outstanding mechanical suspension system on the market. It fulfills each requirement with complete satisfaction and offers, in addition, the best possible base for troffer type lights.

Specify and insist on Securitee Systems.

*Securitee SYSTEMS

W. J. **HAERTEL** & CO.
832 W. Eastman St., Chicago 22, Ill.

DEPT.R

Please send me, without obligation, your complete line of new brochures.

Name_____

Company_____

Address_____

City_____ Zone____ State_____

*T.M. Reg. U.S. Pat. Off.



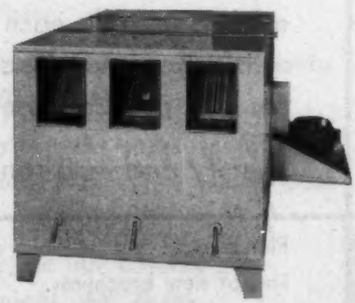
MARLO AIR CONDITIONING HELPED BOOST THIS RESTAURANT'S BUSINESS 40%

SINGLE MULTI-ZONE UNIT PROVIDES INDIVIDUALLY CONTROLLED COMFORT CONDITIONING for FIVE SEPARATE AREAS

Redecorating and air conditioning has increased business 40% for the popular Broiler Restaurant, Portland, Ore., reports operator Walter Holman.

The Broiler is cooled and heated by a Marlo Multi-Zone year-round air conditioner, a single unit which provides individual comfort conditioning for five separate areas, with provisions for adding a sixth zone in the future.

Remodeling contractors were Ferguson and Cassidy; interior decorating was by Harlow Decorating Co.; Commercial Refrigeration Co. installed the air conditioning system, which was designed and engineered by Mark Raymon of Pacific Air Control.



Write today for complete information, including comprehensive new bulletin, on the Marlo Multi-Zone Air Conditioning Unit, designed for applications where one unit must serve a number of zones.

SEE OUR BULLETIN IN SWEET'S CATALOG

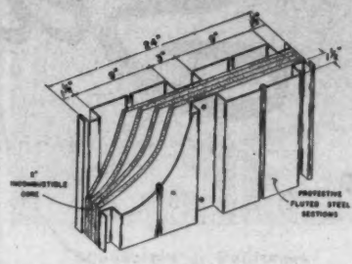
MARLO coil co.

SAINT LOUIS 10, MISSOURI

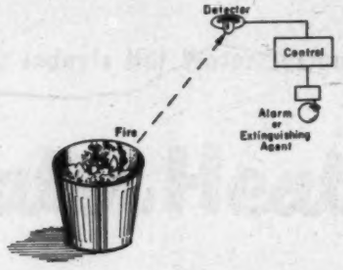
Quality Air Conditioning and Heat Transfer Equipment Since 1925

AE PRODUCTS

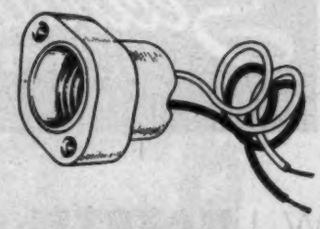
(*Continued from page 304*)



Movable Fire Walls. Interior partitions for use within industrial plants are constructed of 18-gauge steel with a 4-in. incombustible gypsum board core. Each section of the 5½-in.-thick panels, fabricated in widths of 2 ft and in lengths up to 30 ft, can be disengaged and moved as a whole to be set up in new locations. The fluted surfaces can be painted for decor. Recent tests approved by Factory Mutual Laboratories give the wall a 2 hr and 35 min fire rating. *Detroit Steel Products Co., 3113 Griffin St., Detroit 11, Mich.*



Electronic Fire Detector "sees" fire in the infra-red portion of the spectrum by means of a tiny, sensitive element, or electronic eye, which transmits a minute electrical signal when exposed to infra-red radiation. The *Fireye* detector has a 100-ft fire detection coverage. The control panel operates a relay system which either rings a bell or other signal or starts an automatic fire extinguishing system. *Electronics Corp. of America, 720 Beacon St., Boston, Mass.*



Incandescent Sockets of one-piece porcelain with "pigtail" fastening for feed wires is available from *Day-brite Lighting, Inc., 5411 Bulwer Ave., St. Louis 7, Mo.*

(*Continued on page 312*)

Do glass blocks give a "COOPED-UP" feeling?

Some people are more sensitive to claustrophobia than others. To these folks, a solid panel of glass blocks *seems* to be a barrier between them and the outside. We'll agree that even the abundant daylight transmitted doesn't quite relieve the situation for these sensitive people. But even for them there is no reason to think that glass blocks give a "cooped-up" feeling. When people want to see out there are three easy solutions:

First, and most popular, you can install clear-glazed vision strips below the glass blocks as shown in the photograph.

Second, you can install glass block ventilator units. Special tinted glass is available for these units (and for vision strips) so that their brightness will match that of the glass block panel.

Third, install some PC Vue Blocks in the block panel. They are made from clear glass, visibility is good, and there are no openings to maintain.

Your PC representative will help you pick the best system.





Who is more sensitive to a "cooped-up" feeling than school children? That's why the vision strip beneath the glass block panels is a good solution in this classroom in the Edison Junior High School, West Mifflin Borough, Pennsylvania. Architects: Lamont H. Button and Paul F. McLean, A.I.A., Pittsburgh.

PC Glass Blocks

PITTSBURGH PC CORNING

Pittsburgh Corning Corporation, Pittsburgh 22, Pa. • *In Canada: 57 Bloor St. W., Toronto, Ontario*

ALSO SKYTROL® AND FOAMGLAS®



BESIDES "FLOATING" SOUND BAFFLES of Weldwood Paldao, Grace Rainey Rogers Auditorium at the Metropolitan Museum of Art has blond Korina® walls and ceilings with a Weldwood mineral core Fire Door on stage.

How Weldwood paneling helped solve three unusual design p

1. **Esthetic engineering.** In graceful arcs, panels of beautiful Weldwood Paldao suspended above the stage form a striking acoustical treatment in this auditorium at the Metropolitan Museum of Art. Architects Voorhees, Walker, Foley and Smith chose Weldwood panels to satisfy the unusual esthetic demands of the surroundings as well as for their efficiency as sound baffles.

2. **Beautiful space-saver.** This board room does double duty thanks to clever planning that gets full-time service from a room that would normally be unused a good part of the day. Shown here as a library, it quickly becomes an impressive, distinguished meeting room when the panels of walnut Weldwood fold back to conceal completely the bookshelves. Designed by Designs for Business for Henry Holt & Co., New York City.

3. **Old-world elegance with a modern touch.** Looks like traditional carved paneling—yet it has all of plywood's strength, rigidity, easy maintenance and warp-free characteristics. Architects Howe, Prout and Ekman chose superbly grained Weldwood teak panels for the Providence Union National Bank, Providence, Rhode Island.

In any setting beautiful Weldwood paneling is the natural companion to good design. And it can be used in so many ways, to give so many unusual effects, that it's like a new material every time you use it.

A wide range of the world's choicest woods is one of





BEAUTIFUL WALNUT WELDWOOD PANELS turn on full-length hinges to become smooth-paneled wall at a moment's notice.



SUPERBLY GRAINED TEAK WELDWOOD PANELS are beveled to give effect of rich hand-carving for a traditional bank interior.

rn problems

Weldwood®

HARDWOOD PANELING

a product of

UNITED STATES PLYWOOD CORPORATION

World's Largest Plywood Organization

the secrets of Weldwood's versatility. There are over 100 veneers available including Korina, American elm, birch, maple, walnut, Samara*, cherry, prima vera, oak, Nakora*, and mahogany.

Available on special order are such exotic species as Brazilian rosewood, Golden Narra, satinwood, zebrawood, English oak and teak.

And Weldwood's famous lifetime guarantee protects both you and your client. Interior Weldwood paneling is unconditionally guaranteed for the life of the building.

Write for Free 32-page booklet—it gives complete architectural details on installing and specifying Weldwood paneling. Send for your copy today.

*Trademark

UNITED STATES PLYWOOD CORPORATION
Weldwood Building, 55 West 44th Street, New York 36, N.Y.

BY RETURN MAIL send me a copy of your architectural paneling handbook.

AR-9-5

NAME.....

COMPANY.....

ADDRESS.....

CITY.....**STATE**.....



A|E PRODUCTS

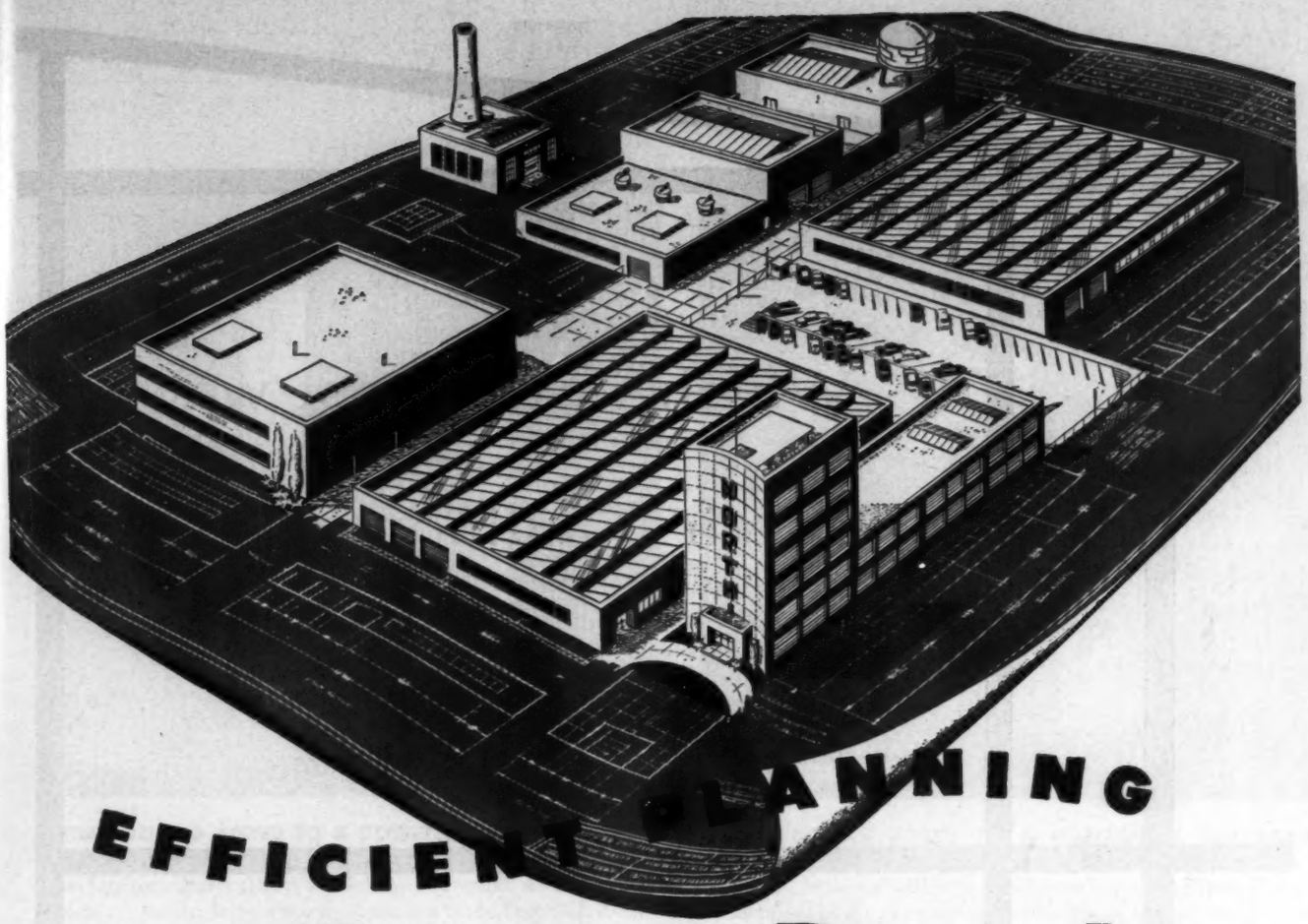
(Continued from page 308)

Waterless Home Air Conditioners for low- and medium-priced homes make use of an air conditioning package located inside the house which is only slightly larger than a standard room air conditioner. Because of their compact size, they can be installed in otherwise wasted or unused spaces, such as a closet or utility room, attic or crawl space. The central system summer air conditioners are available in 1½-, 2- and 3-hp air-cooled models. Extra capacity and low operating costs are possible by using water removed in dehumidification of conditioned air to supplement air-cooled condensing. *Bryant Division, Carrier Corp., Syracuse, N. Y.*

Home Electric Panelboard provides a built-in home power center and also provides an extra margin of electrical capacity for future needs. The *Circuitrol* provides 20 to 42 branch circuits for 100 or 200 amp entrance service sizes. It is available in seven models for either single-phase, three-wire or three-phase, four-wire service. A large directory affords quick identification of general-purpose and small appliance circuits. Brochure available. *Continental Electric Equipment Co., Box 1055, Cincinnati 1, Ohio.*

Dish Dispenser for oval dishes can be installed simply by lowering it through a hole cut in the counter top. An adjusting knob in the base raises or lowers the dispensing level. Up to 6 dozen oval dishes or platters can be dispensed in the stainless steel dispenser. A corrosion-resistant calibrated spring mechanism moves the dish level up as each top dish is removed. *American Machine & Foundry Co., Loweator Div., AMF Building, 261 Madison Ave., New York 16, N. Y.*

Plastic Window Frames are available in a new series of units consisting of durable molded plastic frames designed along modern lines and adaptable to any types of construction. *Plyco Views* are fixed units, in 45 modular sizes, with easily removed glazing. *Plyco Contemporary Vents*, in 9 sizes, are easily removable for cleaning. *Plasti-vents* are weather-stripped vent units, in 5 sizes, which can be used as awning, casement and hopper type installations. *Economy Vents* are for use in basements, barns, etc. *The Plyco Corp., Elkhart Lake, Wis.*



EFFICIENT PLANNING

Starts with RIC·WIL

● Early planning with a RIC-WIL field representative on central heating or air conditioning systems will mean less work later on. Custom engineering and prefabrication of RIC-WIL units offer quick, efficient installation. RIC-WIL's engineering service with forty-five years experience in the Insulated Piping Field is available for *early* planning and consultation.



Write or phone your nearest representative or send for the illustrated RIC-WIL catalog.

Quality Piping Systems . . .
. . . of Exceptionally High Thermal Efficiency

RIC·WIL INCORPORATED

PREFABRICATED **INSULATED PIPING SYSTEMS**

BARBERTON, OHIO

Which is the best way to air condition a HOUSE?



WITH A HEATING AND COOLING UNIT ALL-IN-ONE? The Carrier Year-round Weathermaker fits in only 10 sq. ft. of floor space. It burns gas or oil, cools electrically. It is suitable for installation in attic, basement or closet. It is ideal for new homes. Or it may be used to replace an antiquated furnace in a home which is being modernized. Air-cooled models are available.



WITH COOLING ADDED TO A TOP-DELIVERY FURNACE? This Carrier Conversion Weathermaker adds on to the top of any standard warm air furnace. It's ideal for a basement installation like the one illustrated. The section on top of the furnace contains a cooling coil. Small refrigerant lines run from it to an air-cooled refrigeration section located anywhere outdoors.



WITH COOLING ADDED TO A COUNTER-FLOW FURNACE? This Carrier Conversion Weathermaker fits under any counter-flow furnace. Naturally, it's ideal for any warm air perimeter system . . . particularly when the ducts are in the floor slab itself. A separate, compact refrigeration section needs no water for cooling and it may be located in the yard, the garage or carport.



WITH COOLING ADDED TO A HORIZONTAL FURNACE? This Carrier Conversion Weathermaker pairs happily with any horizontal heater or will fit in a horizontal supply air duct. It may be installed in the crawl space, as shown, or in the basement or attic, as you prefer. With the air-cooled refrigeration section located outdoors, Conversion Weathermakers are notably quiet.



WITH COOLING ADDED TO WET OR RADIANT HEAT? The new Carrier Summer Weathermaker comes complete with its own fan and filter section. The package you see in the picture performs a complete summer air conditioning function. It is so compact it may be located centrally with a short run of duct . . . and with the air-cooled refrigeration section remotely located.

Carrier is the quickest way to the right answer

JUST 1–2 AND THE JOB IS THROUGH!

Carrier has *all* the ways to air condition *any* job—and all Carrier equipment is engineered to the same uniform standard. So short-cut hours of selection by (1) using the Carrier line as your shopping guide and then (2) comparing values.

Get in touch with your Carrier dealer or distributor. He's listed in the Classified Telephone Directory. Or write to us directly. Carrier Corporation, Syracuse, New York.

Carrier

air conditioning • refrigeration • industrial heating



INTERNATIONAL STEEL COMPANY
2051 Edgar Street, Evansville 7, Indiana

Send me without obligation my personal copy of "International Doors for Industry and Aviation";

NAME and POSITION_____

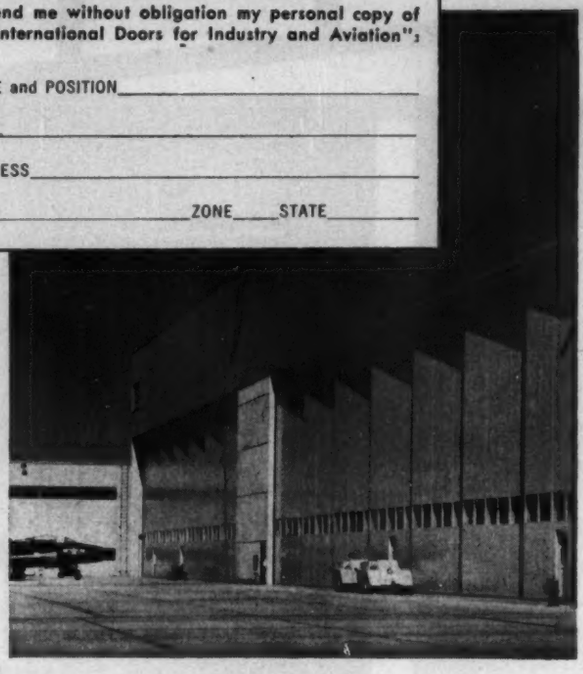
FIRM_____

ADDRESS_____

CITY_____ZONE____STATE_____

THIS COUPON BRINGS YOU BASIC DATA ON NEWEST MAJOR DOOR ADVANCES

another major name in America's air power



served by
INTERNATIONAL HANGAR DOORS

Grumman



INTERNATIONAL-BUILT motor and manually operated hangar doors at

GRUMMAN AIRCRAFT ENGINEERING CORP.
Calverton, L.I., N.Y.

OFFICE OF
ALFRED EASTON POOR,
and
SEELYE, STEVENSON, VALUE & KNECHT,
New York: Architects and Engineers for Project

GUY B. PANERO,
New York: Consulting Mechanical Engineer

GROVE-HENDRICKSON
Riverhead, L.I., N.Y.: General Contractor

Architectural specification of these International Doors was based on two prime points: (1) Specialized experience in the design and fabrication of doors to meet unusual entrance needs. (2) Demonstrated ability to meet such requirements on schedule — and economically.

Almost 500 tons of steel went into this International installation at Grumman's Peconic River Plant and Facilities. Almost 100 door leaves, providing a total opening area of 60,000 square feet, afford weathertight protection when closed. And all are engineered to insure ready operation regardless of climatic conditions.

When considering doors for any industrial or aviation application, investigate International's facilities and abilities . . . both proved the surest way, by the preference of America's major industries.

See Sweet's Architectural or Industrial Construction File for complete catalogs.

INTERNATIONAL SERVICE

2051 EDGAR ST. • EVANSVILLE 7, IND.

INTERNATIONAL STEEL COMPANY

AE LITERATURE

(*Continued from page 238*)

Venetian Blind parts are identified and installation information and specification instructions given in a 26-page manual illustrated with photographs, line drawings and charts. *Levelor Lorentzen Inc., 720 Monroe St., Hoboken, N. J.**

Roof Deck. An 8-page brochure discusses wood fiber roof decking material including methods of manufacture, applications, effects of water, condensation, impact and aging. *Teclum, Div. of Alliance Mfg. Co., 246 N. High St., Columbus 16, Ohio.**

Gas Ranges. A chart of recent gas range developments currently being produced by 40 manufacturers includes a color supplement chart listing available colors and finishes of ranges and recessed range sections. 10¢. *American Gas Assoc., 420 Lexington Ave., New York 17.*

Gypsum Wallboard products are presented in a 16-page catalog which includes illustrated application instructions. *Certain-teed Products Corp., 120 E. Lancaster Ave., Ardmore, Pa.**

Aluminum Acoustical Ceilings. Descriptions, specifications, detail drawings and installation photographs present flush panel aluminum acoustical ceilings in a 4-page folder. *Simplex Ceiling Corp., 552 W. 52nd St., New York 19.**

Red Cedar Siding. Headings, finishes, stains and bleaches of Western red cedar siding are listed with application information by *Western Red Cedar Lumber Assoc., 4402 White-Henry-Stuart Bldg., Seattle, Wash.*

Lock and Escutcheon Designs. *Booklet 626* illustrates, specifies and describes five lock and escutcheon designs and gives decorative ideas for their placement on residential doors. *Schlage Lock Co., 2201 Bayshore Blvd., San Francisco, Calif.**

Electronic Controls for Heating and Ventilating. A reference on available electronic equipment and components, typical system specifications and connection diagrams, and data sheets on control panels for a variety of building installations are contained in a reference manual available from *Minneapolis-Honeywell Regulator Co., Minneapolis 8, Minn.**

(*Continued on page 320*)

WIDE USE OF MICARTA PLASTIC SURFACING BRINGS FUNCTIONAL BEAUTY TO NEW LANKENAU HOSPITAL

Bright gleaming MICARTA greets you the moment you enter Philadelphia's new Lankenau Hospital. You'll see this attractive, super-tough surfacing used on counter and desk tops in reception and administrative areas. You'll find its clean, practical "good looks" on functional surfaces everywhere. Its smart, appealing colors invite staff personnel to dining tables. On furniture pieces its warm beauty cheers and pleases patient and visitor alike.

MICARTA was chosen for these applications because its indifference to ordinary surface maintenance problems keeps upkeep cost low. MICARTA resists scuffs, scratches, stains and burns. It never needs waxing, polishing or refinishing of any kind. It cleans "like new" with a damp cloth.

For any application where functional surfaces must withstand the rigors of constant use, specify durably beautiful MICARTA. You'll find real planning freedom in its wide array of colors, patterns and wood grains. For more information call your nearest United States Plywood Corporation office, or simply use the coupon below. J-06897

This is Westinghouse micarta for INTERIOR PLANNING

Architect—Vincent J. Kling • Furnishings—Hospital Furniture, Inc.



Westinghouse micarta

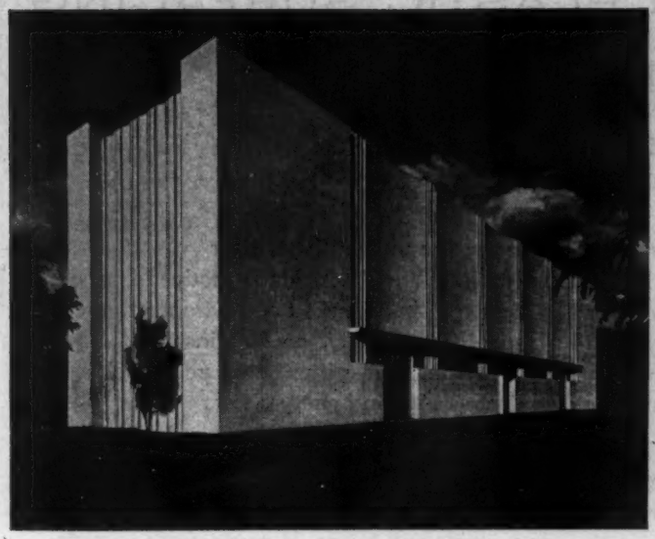
distributed by | UNITED STATES PLYWOOD CORPORATION largest plywood organization in the world and U.S.—MENGEL PLYWOODS · INC.

United States Plywood Corporation
55 West 44th St., New York 36, N. Y.
Please send full information on MICARTA and its applications.

Name_____

Address_____

City_____ Zone____ State_____



Pumping station, Spokane, Wash. *Whitehouse & Price, Spokane, architects*



Public building, Montgomery, Ala. *Warren, Knight & Davis, Birmingham, architects*

Design Distinctive Buildings for any purpose with

Architectural Concrete

You can design buildings of distinction for any purpose with architectural concrete. It is ideal for the functional demands of an industrial plant and equally adaptable to the aesthetic requirements of a graceful church, an imposing public building or an attractive commercial structure.

Architectural concrete is a versatile structural material. You can use it to express any of the traditional designs. You'll also find it well-suited to contemporary style. It allows unusual freedom in design. It possesses tremendous strength and durability, yet it can be cast in a limitless variety of shapes and patterns to reproduce the authentic style and details of any architectural period.

Architectural concrete buildings can meet the highest standards for structural strength, durability and firesafety. They afford maximum resistance to storms, earthquakes and atomic blasts. Low in first cost, concrete structures give years of service with little maintenance. Budget-minded building owners know that means ***low annual cost.***

For information about designing architectural concrete structures, write for free literature. It is distributed only in the United States and Canada.

PORTLAND CEMENT ASSOCIATION
Dept. A9-8, 33 West Grand Ave., Chicago 10, Illinois
A national organization to improve and extend the uses of portland cement and concrete...through scientific research and engineering field work

Junior high school, Williamsport, Pa. *D. H. Grootenboer, Williamsport, architect*



Retail store, La Crosse, Wis. *Boyum, Schubert & Sorensen, La Crosse, architects*



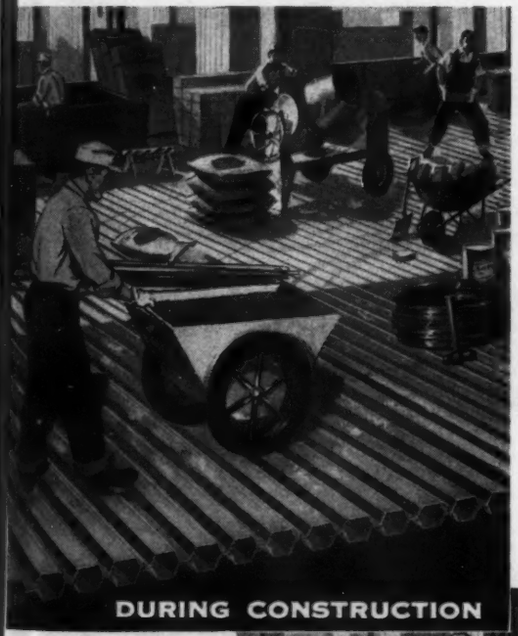
State Architect	Corcelius J. White, Albany, N. Y.
Associate Architects	Kenneth G. Reynolds and Associates, Albany, N. Y.
General Contractor	Brown-Turner Co., New York City
Electrical Contractor	George J. Martin & Son, Inc., Albany, N. Y.
Heating Contractor	E. W. Tompkins Co., Inc., Albany, N. Y.
Sanitary Contractor	Trojan Hardware Co., Inc., Troy, N. Y.
Escalator Contractor	Westinghouse Electric Corp., New York City
Elevator Contractor	Otis Elevator Co., Albany, N. Y.



Pictured here is the State of New York's new Department of Civil Service Building which with a companion Department of Commerce Building will use 231,359 square feet of Milcor Celluflor.

AGAIN IT'S LONG-LIFE MILCOR CELLUFLOR

— this time for two, new State of New York office buildings



DURING CONSTRUCTION

Celluflor's tough, TI-CO galvanized skin doesn't crack or flake, even during the forming of Celluflor cells. This protection resists the abrasion of heavy traffic and storage during construction.



TI-CO galvanizing protects after construction, also. The conditions inside Celluflor's cells remain the same, regardless of time, temperature, or humidity. Structural strength continues unchanged.

—AND THROUGH THE YEARS

The floor of the future meets tomorrow's electrical needs today!

The New York State Department of Civil Service Building, shown above, has a built-in electrical capacity insurance policy — Milcor Celluflor. So has its companion project, the Department of Commerce Building. Both are in Albany, N. Y.

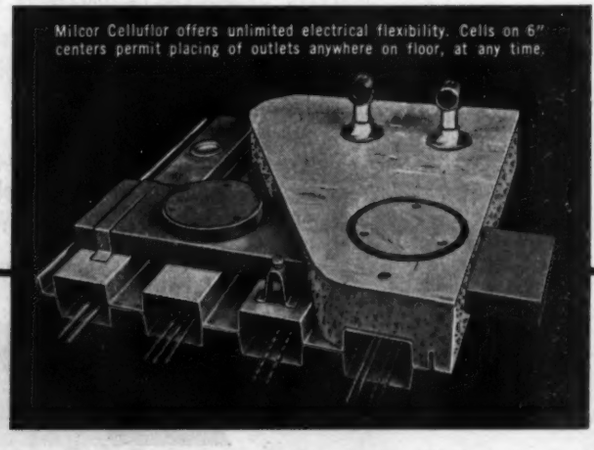
Far-sighted building owners appreciate this protection against obsolescence. They know that electronic progress means more office machines, better communications, more electrical circuits. They also know that healthy businesses require flexibility in electrical systems.

Milcor Celluflor's close-cell spacing provides great electrical flexibility. New outlets may be added virtually anywhere on the floor — or changed easily and inexpensively.

Besides, Milcor Celluflor speeds construction, permits earlier occupancy, requires less costly foundations and structural steel supports.

Include Milcor Celluflor in your planning. Latest bulletins and special assistance are available from us upon request.

MILCOR® CELLUFLOR



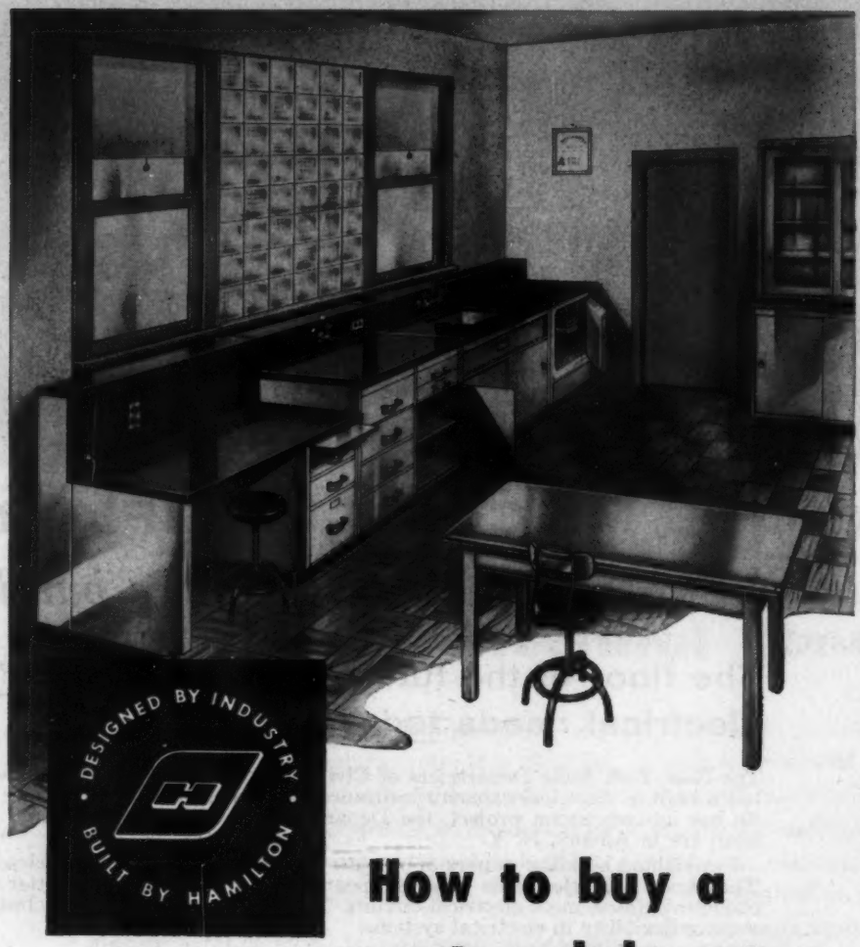
Milcor Celluflor offers unlimited electrical flexibility. Cells on 6" centers permit placing of outlets anywhere on floor, at any time.

INLAND STEEL PRODUCTS COMPANY
4033 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

Offices in Principal Cities

M-1620

Plan Number 4 . . . from the Hamilton Sectional Steel Units catalog. Typical of what you can do with these versatile, modern and serviceable laboratory units.



How to buy a custom laboratory "right off the rack"

Although your next laboratory may be very highly specialized, you can assemble it entirely from Hamilton Sectionalized Steel Units. For Hamilton engineers have worked on laboratory installations throughout all industry — surveying innumerable needs and preferences — enabling our designers to create units for an almost infinite variety of laboratory combinations. You can plan flexibly and individually without custom costs.

Hamilton Catalog No. 214-R tells and illustrates the whole remarkable story, and helps you plan-it-yourself. Write for your own free copy today.

Hamilton LABORATORY EQUIPMENT

HAMILTON MANUFACTURING COMPANY • Two Rivers, Wisconsin

AE LITERATURE

(Continued from page 316)

Air Conditioning. Bulletin HC-C2 gives capacities and dimensional data on standard sizes for floor-mounted and semi-recessed installations. *Fedders-Quigan Corp., Dept. HCR, Heating Div., Lalor & Hancock Sts., Trenton, N. J.**

High-strength Steels. A 174-page working handbook discusses the development and applications of high-strength, low-alloy steels. *U. S. Steel Corp., 525 William Penn Pl., Pittsburgh, Pa.**

Steel Kitchen Cabinets. A specification sheet on kitchen steel cabinets provides a guide to the basic strength and rigidity of steel cabinets. *Steel Kitchen Cabinet Mfrs. Assoc., 1008 Engineers Bldg., Cleveland 14, Ohio.*

Home Wiring. Some of the subjects covered in an eleven-chapter home wiring handbook include electrical equipment for the home, electrical control centers and service entrances, communication systems, estimating electrical costs, voltage drop and circuit protection. $1.00. *Consumer Service Dept., Westinghouse Electric Appliance Div., Mansfield, Ohio.*

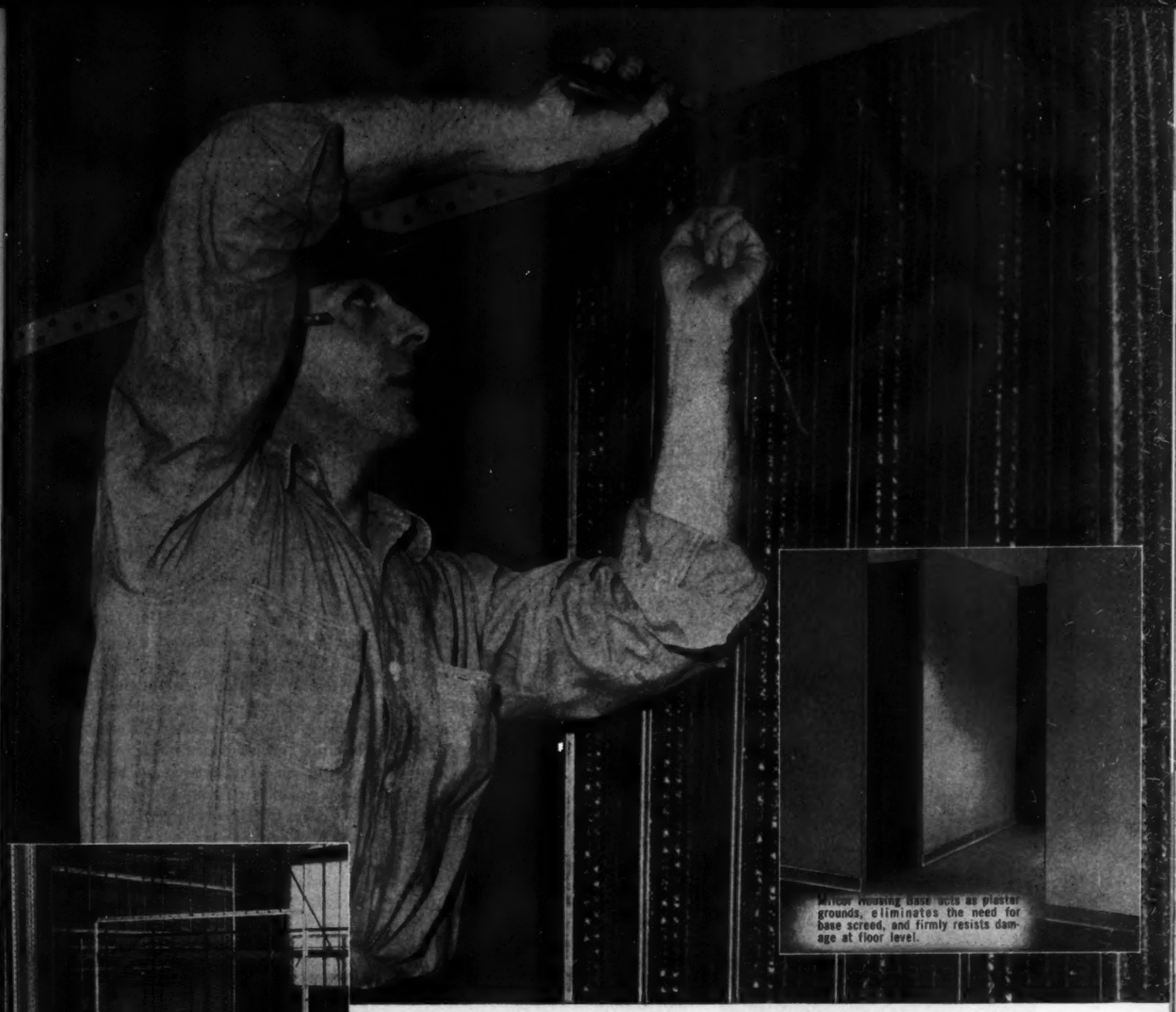
Cooling Tower. Design features of a cooling tower line are explained in a 12-page illustrated catalog which includes rating tables and capacity data. *Cooling Equipment Div., Binks Mfg. Co., 3122 Carroll Ave., Chicago 12, Ill.*

Doors. Rolling steel sectional doors for residential, commercial and industrial buildings are described in a 4-page illustrated folder which includes framing details and specifications. *Roly-Door Div., Morrison Steel Products, Inc., 601 Amherst St., Buffalo, N. Y.**

Architectural Letters. A folder featuring architectural letters, ornamental metal work, tablets and special lighting fixtures has been released by *Meirjohan-Wengler Co., 1102 W. 9th St., Cincinnati 3, Ohio.*

Aluminum Tubular Sash. A booklet describing aluminum tubular sashes tells how they are fabricated, gives detailed illustrations and specifications. *Marmet Corp., Wausau, Wis.**

(Continued on page 322)



Milcor housing base acts as plaster grounds, eliminates the need for base screed, and firmly resists damage at floor level.



MILCOR CHANNEL STUD SOLID PARTITION

A steel-reinforced, vertical slab of plaster, 2 inches thick. Cold-rolled steel channels that run from floor to ceiling reinforce the partition vertically and hold the metal lath to which plaster is applied. The metal lath reinforces the partition horizontally and diagonally.

COST OF NON-BEARING WALLS CUT THREE WAYS

— with Milcor 2-inch Studless Solid Partitions

(1) Material costs are less, because there are no studs. Instead, Milcor Stay-Rib Metal Lath is erected so that its ribs provide vertical reinforcement.

(2) Erection costs are less, because lathing is quick and easy. The metal lath fastens to a ceiling runner and a floor runner—or to a ceiling runner and Milcor Housing Base.

(3) Maintenance costs are less, because Milcor Studless Solid Partitions resist structural stresses and are crack-resistant.

Milcor studless, 2-inch, metal-lath-and-plaster construction offers the same fire-resistance provided by 2-inch walls with channel reinforcement. Light weight and efficient sound insulation are other important characteristics.

Milcor Catalog No. 222 — available upon request — helps you make the most of these advantages, in planning non-bearing, subdividing partitions . . . enclosures . . . or free-standing furring walls.

MILCOR® SOLID PARTITIONS

INLAND STEEL PRODUCTS COMPANY

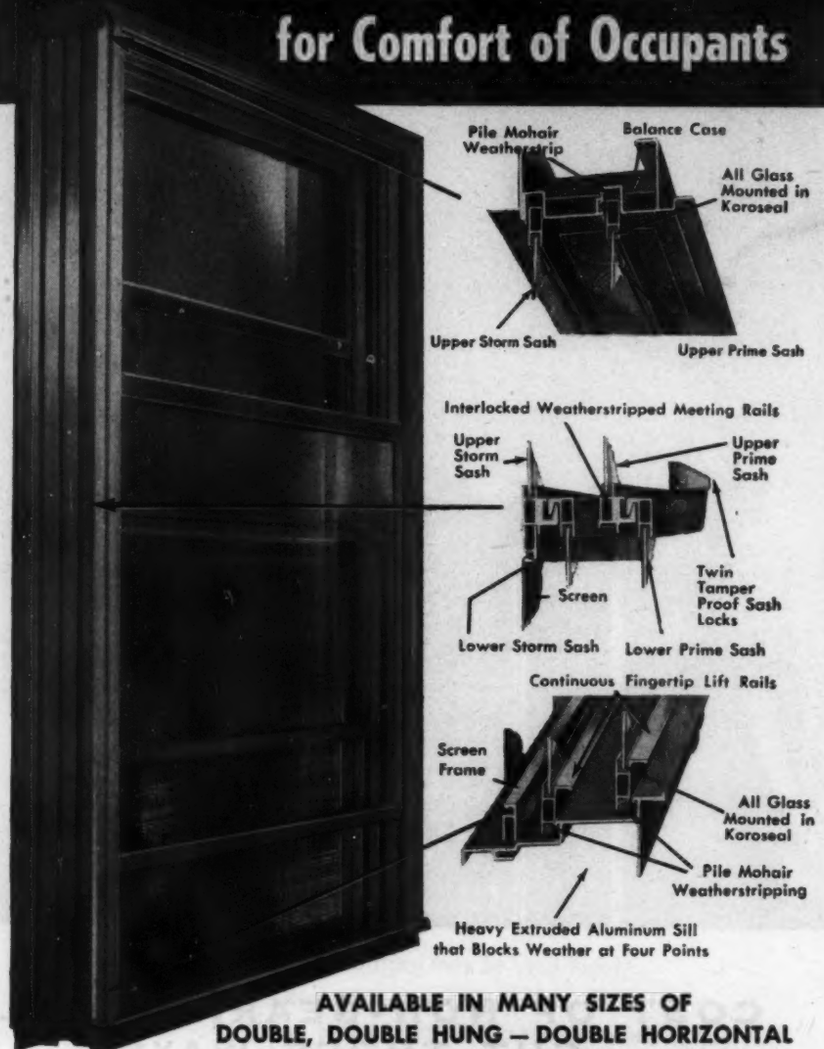
4033 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

BALTIMORE 5, MD., 5300 Pulaski Highway • BUFFALO 11, N. Y., 64 Rapin St. • CHICAGO 9, ILL., 4301 S. Western Blvd. CINCINNATI 25, OHIO, 3240 Spring Grove Ave. • CLEVELAND 14, OHIO, 1541 E. 38th St. • DETROIT 2, MICH., 690 Amsterdam Ave. • KANSAS CITY 41, MO., P. O. Box 918 • LOS ANGELES 58, CALIF., 4807 E. 49th St. • NEW YORK 17, N. Y., 230 Park Ave. • ST. LOUIS 10, MO., 4215 Clayton Ave.

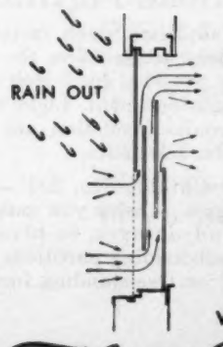
*Reg. U. S. Pat. Off.

M-142

Fleetlite DOUBLE WINDOWS that Insulate — yet CONTROL VENTILATION for Comfort of Occupants



AVAILABLE IN MANY SIZES OF DOUBLE, DOUBLE HUNG — DOUBLE HORIZONTAL SLIDING — MATCHING PICTURE WINDOWS



All-sash removable from the inside for easy cleaning. Made of heavy extruded aluminum. Complete with window frame. Factory glazed. No Maintenance. Nothing to store. Never needs painting or puttying. Write for information.

- ☐ Chart of Standard Window Sizes
- ☐ Typical Installation Details
- ☐ Location of Fleetlite Installation in my area
- ☐ Quotation on Windows for Attached Plans.

Gentlemen: Please rush the material checked above.

Name.....

Address.....

City.....

Fleetlite — AMERICA'S finest WINDOW

FLEET OF AMERICA, INC., 506 New Walden Ave., Buffalo 25, N. Y.

AE LITERATURE

(*Continued from page 320*)

Air Distribution. A 71-page, comprehensive manual covers multi-vent, low velocity air distribution systems from the basic principles to installation data for all types of ceilings. *The Pyle-National Co., Chicago, Ill.**

Decorative Window Fabrics. A swatch book containing over 300 swatches of piece dyed fabrics and photographs of more than 250 prints with accompanying swatches of 24 print clothes of Fiberglas decorative window fabric can be obtained from the *Owens-Corning Fiberglas Corp., 16 E. 56th St., New York 22, N. Y.**

Plant Layouts. The 1955–56 price list and catalog, including instructions, of *visual* plant layout equipment can be obtained from *Visual Plant Layouts, Inc., Penna. Ave., Oakmont, Pa.*

Air Conditioning Units for Separate Areas. A 12-page catalog contains specifications and selection and ordering information on *Multizone* units for simultaneous air conditioning of separate rooms or zones at desired temperatures. *Bush Mfg. Co., West Hartford, Conn.**

Radiant Heating. A 24-page application data book on radiant panel heating systems gives information on design, layout and installation. *American Brass Co., Waterbury 20, Conn.**

FILMS

Carbide Production. "Fiery Magic" demonstrates steps in the manufacture of carbide and shows the uses of acetylene as a base in modern chemical processes. 23 min, 16 mm, sound, color. *Nat'l. Carbide Co., 60 East 42nd St., New York 17.*

Air Reduction. "Nothing But the Best" shows *Airco's* tungsten inert-gas arc-welding process. 20 min, sound, color. *Air Reduction Sales Co., 60 East 42nd St., New York 17.*

Aluminum Products. "New Horizons in Aluminum Brazing" describes the processes of furnace, torch and dip brazing of aluminum. 22 min. "Welding Advances in Aluminum" presents developments in inert gas and shielded arc welding of aluminum. 28 min. Both films presented by *Alcoa Aluminum Co., Pittsburgh;* distributed by *Association Films, Inc., 79 E. Adams St., Chicago.*

in the wake of a junior tornado!

Havoc reigns when Junior takes a bath! But, as informed architects and builders know, Pomona's "Space-Rite" Perma-glaze deck tile is impervious not only to Junior's hard, scratchy toys and the dirt and grime of his day's foraging—but also to soapy water and even corrosive chemicals, harmful to ordinary surfaces! That's because only Pomona's exclusive fusing process produces this beautiful pebbled finish of flint-rock hardness. Uniform joints are assured through Pomona's "Space-Rite" feature. Shown here, exquisite new Mercedes Blue in Perma-glaze 6″ x 6″ deck tile.

Write for free catalog with actual tile samples of full line of colors.

POMONA TILE

POMONA TILE MANUFACTURING CO.

629 N. La Brea, Los Angeles 36, Calif. • WEbster 8-3861

Seattle • San Francisco • Pomona • Long Beach • Arkansas City, Kan. • Houston • St. Louis
Phoenix • Salt Lake City • N. Hollywood • N. Kansas City, Mo. • Chicago • Denver • Dallas



from Architecture to Acoustics



LOWELL Is Preferred for Profitable Sound Installation

In planning sound installations, specify Lowell—the complete line of "ear level" sound equipment preferred by the majority of architects and acoustical engineers.

Lowell has proved superior for new and existing construction in more large installations than any other make.

LOWELL PROTECTIVE SPEAKER ENCLOSURES

CP Series (illustrated) for new constructions ready for plastering. XCP Series for existing constructions. Spot-welded steel with rust preventive coating. Heavily undercoated interior prevents metallic resonance. Fully protects speaker from fire, dust, rodents or falling mortar. Easily installed.



LOWELL CEILING BAFFLES

AL Series, illustrated, mounts flush in low-ceiling areas. Effective 360° dispersion of clear low-level sound. Conical diffuser "floats" on soft rubber grommets. Heavy gauge aluminum. Models available for 6″ to 15″ speakers.

Lowell—ONE source for over 100 Models of:
• Ceiling and Wall Baffles • Enclosures • Grilles • Accessories • Intercom Equipment.

Write for complete information and specifications

WORLD-WIDE REPRESENTATION

HEARD EVERYWHERE **Lowell** **MANUFACTURING COMPANY**

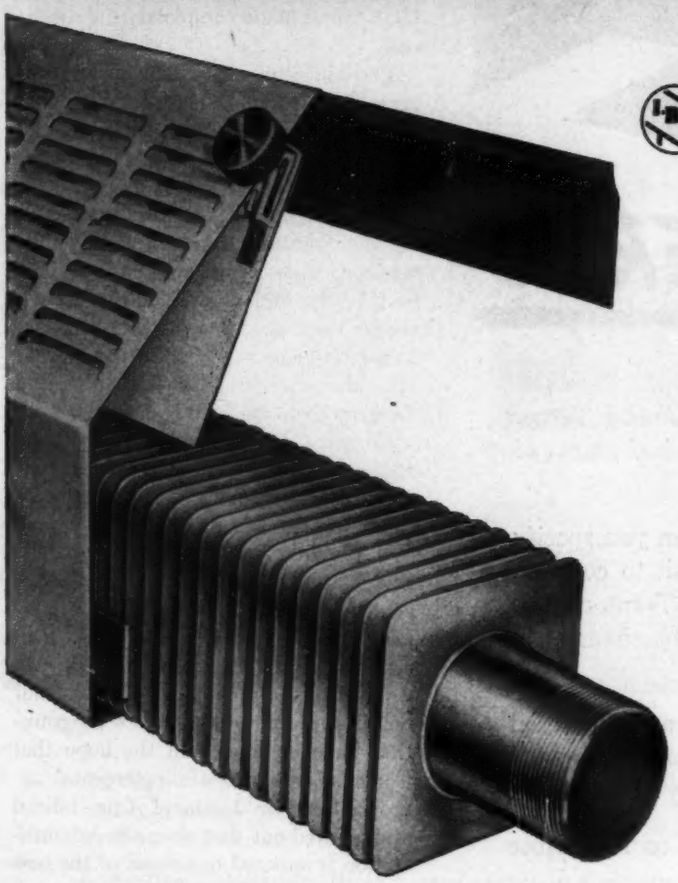
3030 LACLEDE STATION ROAD, ST. LOUIS, MO., U.S.A.

IN CANADA: ATLAS RADIO CORP., LTD. • 50 WINGOLD AVENUE, TORONTO 10, CANADA

SARCOfin

When you buy or specify radiation

make sure you get all these advantages!



Sarcofin offers you:

APPROVED RATINGS—as established by Institute of Boiler and Radiator Manufacturers for finned-tube and baseboard radiation.

FULL GUARANTEE—top-quality Sarcofin products, backed up by a *1-year guarantee* against defects in materials and workmanship. Heating elements *guaranteed* for maximum working pressures.

COOPERATION—careful selection of radiation by experienced Sarco and Sarcotherm heating engineers.

UNDIVIDED RESPONSIBILITY—the protection and convenience assured by obtaining from *one* "Complete Line" source...SARCO-SARCOTHERM... not only Sarcofin finned-tube and baseboard radiation but also heating specialties for steam and hot water, condensation and vacuum pumps, temperature regulators, and weather-compensated control systems for steam and hot water heating.

SARCO COMPANY, INC.
SARCOTHERM CONTROLS, INC.
Empire State Building, New York 1, N. Y.

MAIL COUPON FOR THESE BULLETINS

Sarco Company, Inc.—Sarcotherm Controls, Inc.
Empire State Building, New York 1, N. Y.

Please send me:
☐ 32 page Bulletin No. 1650 on Sarcofin Finned-Tube Radiation.
☐ Bulletin No. 1625 on Sarcofin Baseboard Radiation.
☐ Also information on_____

NAME_____
FIRM_____
ADDRESS_____
CITY_____ STATE_____

4008-B





FOLLANSBEE *TERNE*

There isn't a roofing material available today that offers the unlimited design and color possibilities as does Follansbee Terne. For today's extremely low-pitched roofs, flat-locked seams of Terne are the only fully satisfactory answer.

Roof design is not limited to one pattern when you specify Follansbee Terne. You can select a design detail to conform to the architectural style of the building. And Terne can be painted any color, *any time*, and the color can be changed to match or contrast properly with the trim color.

Follansbee Terne has earned its reputation as a material with unlimited design possibilities and permanence by giving trouble-free service for 75 years and more on many installations.

If you haven't got the latest installation data on Follansbee Terne, we will be happy to send it to you.

Write for information about our new pan former and seamer which make standing seam Terne roofs economical.

Follansbee Terne is Carried in Stock by Leading Sheet Metal Distributors Everywhere

FOLLANSBEE
STEEL CORPORATION
Follansbee, West Virginia
Sales Offices in Principal Cities

Cold Rolled Strip • Seamless Terne Roll Roofing • Polished Blue Sheets and Coils

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 38*)

bill allowing none at all. The President had originally asked for a two-year program of 35,000 units a year. The final compromise provides 45,000 units for one year.

But the Administration was also defeated on two other housing issues it regards as important ones — the new housing bill eliminates the "workable program" requirement as a prerequisite for new public housing contracts; and the Home Loan Bank Board, for the past 16 years one of the major constituent agencies of the Housing and Home Finance Agency, was separated from HHFA and made completely independent.

The bill also established a new program of Federal Housing Administration insurance on trailer parks, limiting the insurance figure to $1000 a trailer space or $300,000 a mortgage; a new $100 million program of loans to municipalities for construction of such public works as water, sewer and gas systems; and a $500 million revision and extension of the college housing loan program to permit loans at 2¾ per cent not only on dormitories but also on such related facilities as dining halls, cafeterias, et al.

Congress did not, however, appropriate any money for these new programs, and Federal housing officials maintain there won't be any money to carry them out. Congress told the Bureau of the Budget that if new programs were included in the bill, it could make quarterly advances to HHFA to carry them out. But it was not expected the Bureau would like the idea of spending regular housing appropriations on new programs that have no money in the hope that Congress will pass a supplemental appropriation in January. One official also pointed out that since the Administration is opposed to several of the new programs, there is not likely to be much pressure on the Bureau to over-appropriate for the old programs.

Other major features of the housing bill:

— Extension of the FHA Title I home improvement program to Sept. 30, 1956.

— Increase from $5 million to $12.5 million mortgage ceilings under FHA rental programs.

— Increase of $400 million for urban renewal for 1956 and 1957 and an additional $100 million to be used at the discretion of the President.

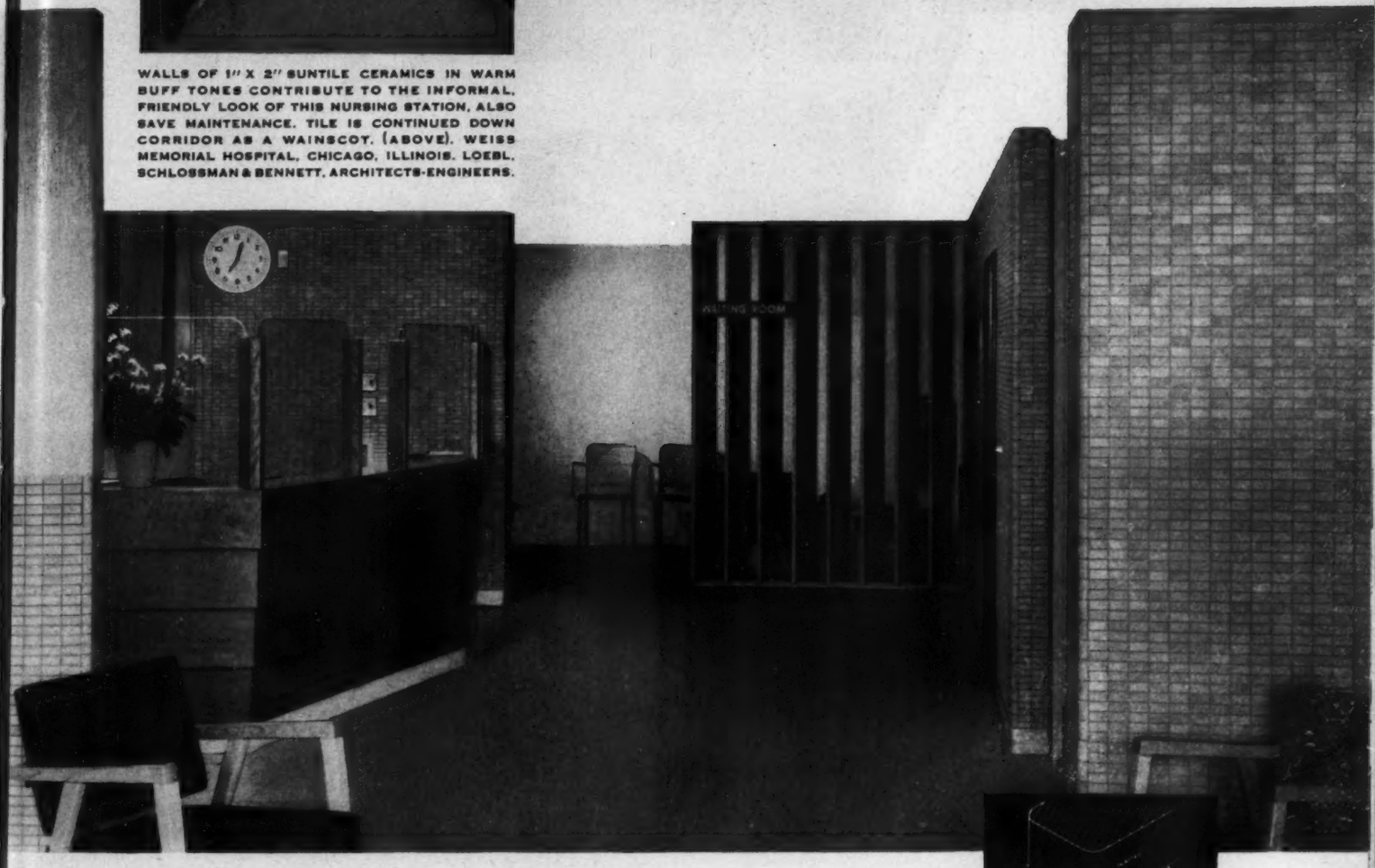
(*Continued on page 330*)

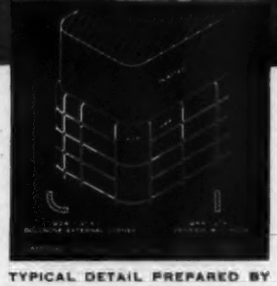


WALLS OF 1" X 2" SUNTILE CERAMICS IN WARM BUFF TONES CONTRIBUTE TO THE INFORMAL, FRIENDLY LOOK OF THIS NURSING STATION, ALSO SAVE MAINTENANCE. TILE IS CONTINUED DOWN CORRIDOR AS A WAINSCOT. (ABOVE). WEISS MEMORIAL HOSPITAL, CHICAGO, ILLINOIS. LOEBL, SCHLOSSMAN & BENNETT, ARCHITECTS-ENGINEERS.

Suntile ceramics

help give a hospital home-like scale...





TYPICAL DETAIL PREPARED BY OUR DESIGN STAFF SHOWS THIN SETTING-BED INSTALLATION USING CAMASTIC C ADHESIVE.

You'll find endless new design possibilities in the smaller sizes* and interesting range of textures and colors offered by Suntile Satinized Ceramics.

For quick installation, these rugged porcelain and natural clay tile are delivered mounted on large sheets of back-up material. And they are equally serviceable in walls or floors—*outdoors* as well as inside.

Your clients will like both the appearance and the maintenance-economy of Suntile Ceramics.

Can our Special Design staff help you?

The services of our trained ceramic artists, headed by Harry J. Macke, are always available to you—at no obligation. Send your plans or elevations for suggested tile applications, or let us put your own tile designs in layout form.

Send coupon for Sample Tile Design Solutions by

THE CAMBRIDGE TILE MFG. CO. P. O. BOX 71, CINCINNATI 15, OHIO

*(3/32" x 1/2", 1" x 1", 1" x 2", 2" x 2")



Gentlemen:

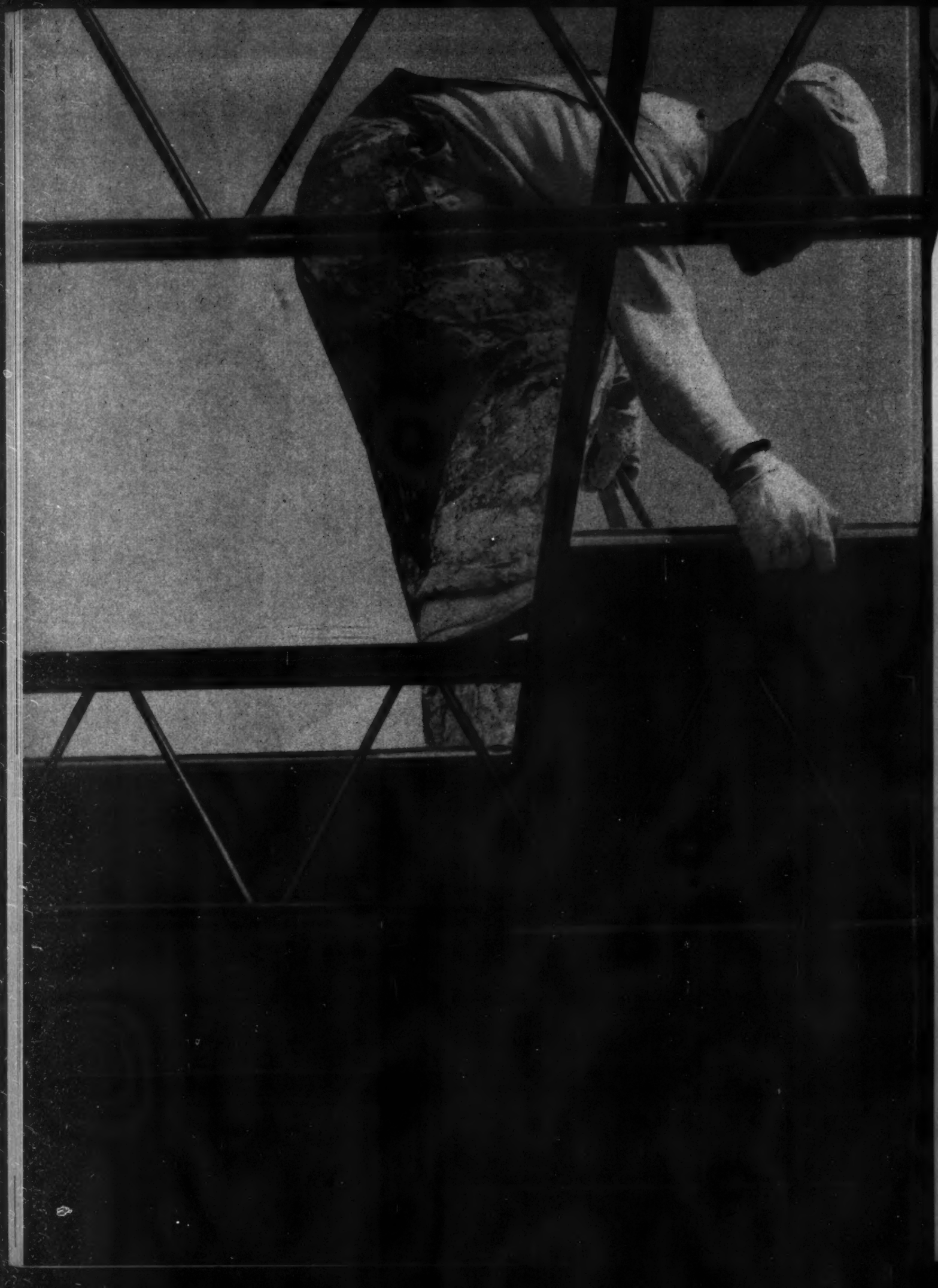
Please send me free sample drawings prepared by the Suntile Design Staff for specific jobs. AR 559

Name.....

Firm.....

Address.....

City.....Zone.....State.....



NEW roof deck system!

PYROFORM

MINERAL FIBER FORMBOARD

PYROFILL*

GYPSUM CONCRETE

fights fire . . . insulates . . . absorbs sound

United States Gypsum now offers a new roof deck system that fights fire, noise, heat and cold. PYROFORM mineral fiber formboard provides the desirable insulation and acoustical advantages. PYROFILL gives the economy and durability of a poured monolithic gypsum roof deck—both are incombustible.

Used together they mean savings in construction costs—economy in plant heating and cooling. Yearly fire insurance premiums are often reduced as much as 30%.

PYROFORM-PYROFILL roof decks have a U factor of .16. An excellent sound absorber—PYROFORM formboard has an N.R.C. of .75. PYROFORM-PYROFILL weighs only 10 to 12 lbs. per sq. ft.; light weight saves structural steel and footings. PYROFILL sets in less than an hour and is then capable of carrying normal construction loads. A single crew can pour from 20,000 to 30,000 sq. ft. per day, ready for roof covering.

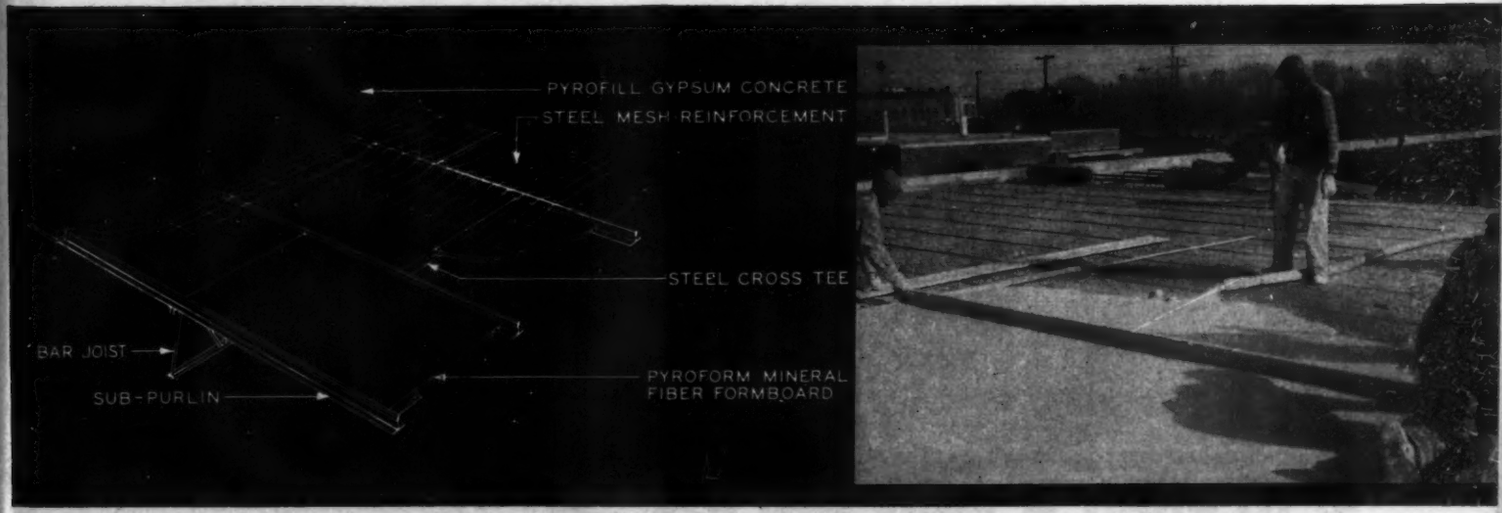
FOR FREE SAMPLE of PYROFORM and full information, write Dept. AR-4, 300 W. Adams St., Chicago 6, Illinois.

PYROFILL roof decks fear no fire

UNITED STATES GYPSUM

the greatest name in building

USG UNITED STATES GYPSUM



Typical installation of new PYROFORM formboard, on steel cross tees. New process felts and bonds mineral fiber into boards, 1" x 32" x 48".

*T. M. Reg. U. S. Pat. Off.

Pouring PYROFILL slurry. Outstanding advantages: incombustible, low in cost, adaptable, lightweight, strong, durable, quickly installed.

Standby electric power in operating rooms only *is not enough!*



ONAN Standby Electric Plants supply power for all essential services

Patients, hospital personnel and property may be endangered when any other vital equipment cannot be operated or important service performed . . . *especially when the power outage is of long duration.*

From the wide range of Onan Electric Plants you can specify a model with the capacity to operate *all essential equipment* . . . automatic heating system, respirators, aspirators, X-ray machines, ventilators, communications, pumps, elevators and lights *for as long as these services are needed.*

When power interruptions occur, the Onan Emergency Power System takes over automatically . . . supplies electricity for the duration of the outage . . . and transfers the load back to the regular source of power when service is restored.



Model 25HN
25,000 watts

Standby power for every need

Hospitals, homes, schools, churches, hotels, radio stations, stores, businesses . . . all modern buildings need standby protection. Onan builds units for any requirement . . . 1,000 to 50,000 watts.

Write for Architects kit SP1020

D. W. ONAN & SONS INC.

2635 UNIVERSITY AVE. S. E. • MINNEAPOLIS 14, MINNESOTA

Onan ELECTRIC PLANTS

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 326*)

— Change in the basis on which a mortgage can be insured for both cooperative housing and urban renewal from "estimated value" to "estimated replacement cost."

— Increase of FHA's general mortgage insurance authority by $4 billion.

— A $48 million revolving fund for planning advances to localities for community facilities, with $10 million available this year, $12 million in fiscal 1957, and $14 million in 1958.

— A new military housing program permitting 100 per cent FHA insurance on houses costing within $13,500 per family unit. A new authorization of $1.3 billion is set up for all three services.

School Aid Dies

As long expected, the controversy over how to aid states and localities in the financing of badly needed new school facilities they cannot build themselves without risking some form of Federal control over education or running afoul of the segregation or religious issues wound up in postponement of the whole question to the next session. The Kelley bill got House Education Committee approval before the drive for adjournment removed all possibility the House Rules Committee might clear it for floor consideration at this session.

$111 Million for Hospitals

The Hill-Burton hospital construction program got a total of $111 million, $15 million more than last year. The appropriation included some $90 million for the original hospital program, the balance allocated to the four new types — nursing homes, rehabilitation centers, chronic disease facilities and diagnostic or treatment centers — added to the Hill-Burton program in the new legislation last year.

The President's new health program, including FHA-type loan guarantees to aid communities in financing new hospital construction, never got out of committee.

Military Construction

A military construction program totaling more than $2 billion was authorized and $1.2 billion in new money and $741 million of transferred funds will support it. The Air Force got the lion's

(*Continued on page 334*)

Preview by Monsanto

Beauty is permanent when walls are paneled with melamine* laminated plastics



Like many another material, decorative laminates made with melamine resins got their start in the modern kitchen. Their usefulness as a durable, colorful surfacing for counter areas has made them a standard specification in millions of homes.

Today, the same material is demonstrating its versatility for a wide range of other applications. Sketched above is a television room in which melamine laminated plastics will panel walls and cabinets, also tables, etc.

The smooth, practically indestructible material will require a minimum of maintenance. It will sponge clean with a damp cloth. It will be resistant to scratching and chipping.

Melamine laminates are easily sawed to any size and cement permanently to any rigid surface. They do not swell or warp.

Lightweight sheets of these decorative laminated plastics are carried in scores of colors and patterns at most building supply stores. They are also available already glued to plywood or hard board.

**Monsanto supplies melamine and phenolic resins for decorative laminates sold under these trade names:*

Arborite • Consoweld • Decarlite • Farlite • Fiberesin
Formica • Lamin-art • Micarta • Nevamar • Panelyte
Pionite • Plastilight • Rallite • Richelain • Textolite

FOR ARCHITECTS: *A new report, "Plastics in Housing," has recently been published by the Department of Architecture of the Massachusetts Institute of Technology. The study was made possible by a grant-in-aid from the Market Development Department of the Plastics Division of Monsanto Chemical Company. Copies are available at $2.00 each. Address Monsanto Chemical Company, Dept. AR9, Springfield 2, Massachusetts.*

MONSANTO

SERVING INDUSTRY . . . WHICH SERVES MANKIND





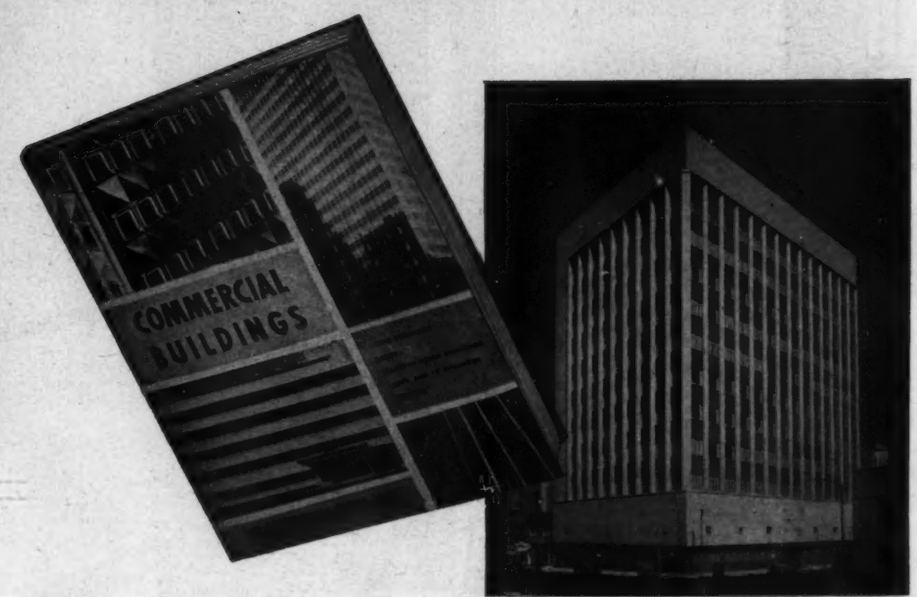


Get this valuable book of NEW IDEAS

for architects who design

COMMERCIAL BUILDINGS

by the editors of Architectural Record





Since the end of World War II the pages of *Architectural Record* have reported in text and photographs a momentous evolution in the physical design of office buildings, banks, transportation buildings, radio and television studios, and theaters—the structures that house a large segment of our commercial enterprise. A whole new set of conditions now governs the design of commercial buildings, and must be fully understood by the architect working in this field.

Commercial Buildings draws exclusively upon the best material published in *Architectural Record* to present an organized, comprehensive picture of the "new architecture" that has emerged in the postwar era. The reader of this book can clearly discern:

- how the movement of business to suburban districts has given the architect space and freedom to experiment with new concepts of design
- how steadily rising costs have favored the choice of contemporary design over the more ornate and expensive traditional styles
- how new materials like lightweight aluminum have altered both the structural frame and the external facades of many buildings
- how the American habit of travel, greatly magnified in recent years, has promoted better design in airport buildings, rail and bus terminals, and roadside service stations
- how our frantic pursuit of entertainment has fostered building activity in radio and TV studios, and theaters for both live plays and films.

Today, these basic social trends are still gathering momentum, and will continue to influence architectural thinking and practice for years to come. For that reason Commercial Buildings is a book of far more than academic interest to the architect; it will serve him as a reference, as a planning manual, and as a source of positive guidance for designing a building that measures up to the highest standards of good architecture.

MAIL THIS COUPON FOR YOUR COPY OF COMMERCIAL BUILDINGS

DODGE BOOKS 921
119 West 40th Street
New York 18, N. Y.

Please send me.....copy(s) of Commercial Buildings at $9.75 each. Unless I am completely satisfied with the book I may return my copy for a full refund of purchase price.

☐ payment enclosed ☐ please send bill
(please add 3% sales tax for New York City delivery)

Name.....

Address.....

City.....Zone.....State.....

ONE OF A SERIES OF IDEAS FOR YOUR FILES

ANOTHER NEW IDEA...

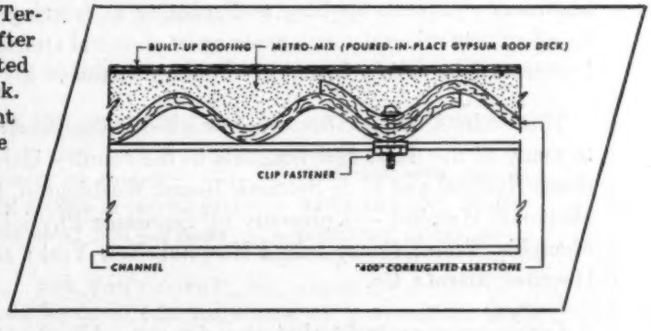


WITH CORRUGATED ASBESTONE

Corrugated Asbestone teams up with gypsum on these fireproof, corrosion-resistant platform shelters

Train shed roofs in New Orlean's new Union Passenger Terminal will stand up against corrosion and weather year after year. They're made of fireproof Gold Bond Corrugated Asbestone "400" topped with poured gypsum roof deck. They're as good looking as they are practical... natural light and shadow lines are formed by the texture. And rock-like asbestos and gypsum need no upkeep.

How many uses can *you* think of for Gold Bond Corrugated Asbestone? Wherever you use it, you're getting lasting strength and good looks. Write for details on this unique Gold Bond construction system. Address Dept. AR-95, National Gypsum Company, P. O. 5257-B, New Orleans 15, La.

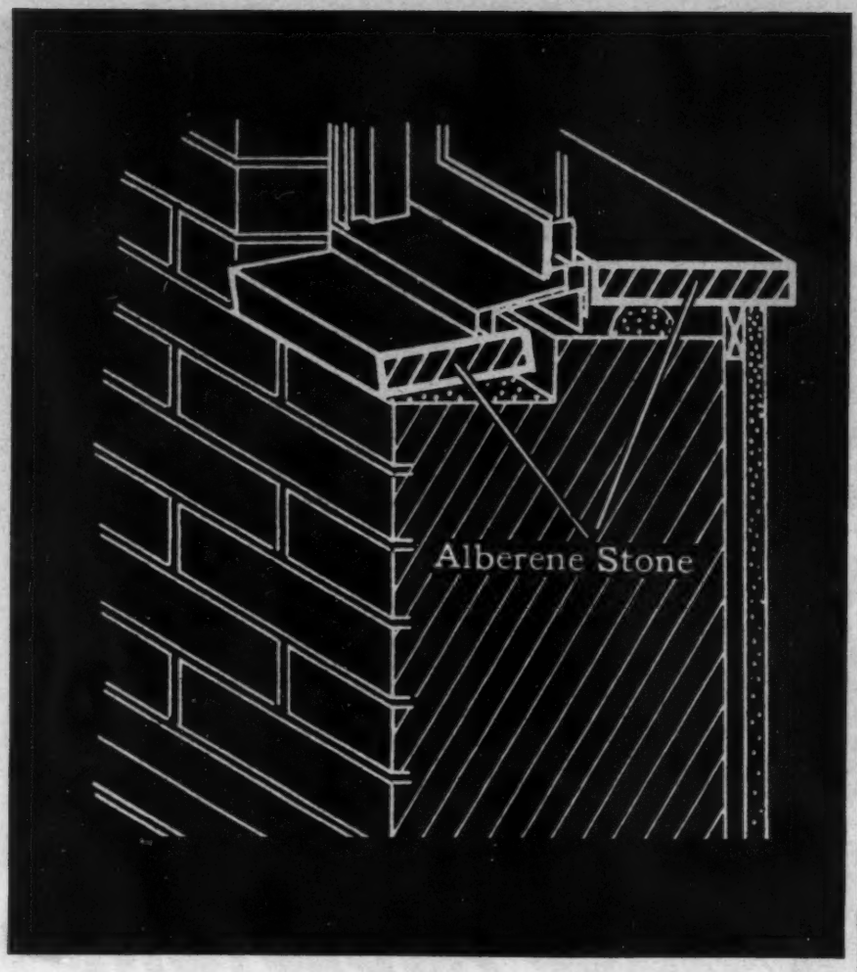


NATIONAL GYPSUM COMPANY • BUFFALO 2, NEW YORK

Build better with Gold Bond



. . . CORRUGATED ASBESTONE



Let's talk "SILLS and STOOLS"

—that are both durable and attractive.

Alberene Stone—*the natural silicate stone*—is weatherproof. Its low absorbency prevents spalling and splitting in freezing temperatures. Its all-silicate mineral components resist chemical attack, staining and loss of surface polish. It requires no maintenance.

That's why Alberene Stone window stools have recently been shipped to many of the finest new hospitals in the country including: Providence Hospital and U. S. Soldiers' Home, Washington, D. C.; Baptist Memorial Hospital — University of Tennessee Physiology Building, Memphis, Tenn.; Coney Island Hospital, New York; and the Grady Hospital, Atlanta, Ga.

For information and technical assistance, address: Alberene Stone Corporation, 419 Fourth Avenue, New York 16, N. Y.

ALBERENE STONE

provides LOW ABSORBENCY protection

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 330*)

share as usual (see table, page 38); but one small (relatively) item of the Air Force money — the requested $79 million to start construction of the Air Force Academy at Colorado Springs — got snarled up in the by-now familiar debate over the Academy design; and in the end the Air Force got $20 million of the funds requested for Academy construction for "essential preliminary construction" pending "finalization" of the design.

Boost Airport Aid

The Congress rather unexpectedly provided a $230 million four-year program of extended Federal aid to communities for airport construction, with $43 million in new contract authorization this year in addition to the $20 million appropriated in the Administration's own budget for the item. The Administration, which was opposed to the new measure, has not tended to push the old airport aid program and this year actually had asked only $11 million for it; Congress raised it to $20 million.

Under the new program, there will be no restriction on aid based on airport size — a Commerce Department ruling of last year had limited eligibility to airports enplaning at least 3000 passengers annually or permanently basing a minimum of 30 planes. Funds will also be available for terminal buildings and allied facilities, also prohibited until now under a Department ruling.

Air Pollution Research

A five-year $15 million air pollution research program was authorized in legislation which will be administered by the Department of Health, Education and Welfare with the aid of an advisory committee of Federal officials and citizens.

Miscellany

Such measures as the President's proposal for a Federal Advisory Commission on the Arts, the perennial Jenkins-Keogh bill allowing self-employed professionals (like architects and engineers) to set up an individual retirement system by a tax deferment method, and the Federal Construction Contracts Act (the "bid-shopping" bill) will undoubtedly be trying for better attention in the second session of the 84th Congress.

(*Continued on page 338*)



it's Woodco Windows

for the Beautiful point-of-view...



THERMOPANE® Insulating Glass available to reduce condensation and cut fuel bills!



No-draft ventilation . . . even when it's raining!



Clean inside and outside surfaces . . . from inside!



Roter-type operator . . . Finger-tip control . . . so simple a child can do it!

There can be no short cut to quality. If you share this point of view, you will undoubtedly agree that WOODCO E-ZEE Loc Wood Awning Windows represent the finest for beauty, construction, performance and ease-of-installation. And if the point-of-view is economy we suggest that satisfaction is true economy.

Nothing to adjust • Nothing to get out of adjustment

CHECK THE WOODCO E-ZEE Loc PATENTED FEATURES:

- EASY TO LOCK
- SEQUENCE AIR CONTROL
- TOXIC-TREATED TO PREVENT DECAY
- EXTRA HEAVY SASH and FRAME
- DOUBLE VINYL WEATHERSTRIPPING (Pat. Pend.)
- WATER-REPELLENT TREATED
- COMPLETELY ASSEMBLED

. . . AND DON'T FORGET, MR. ARCHITECT

Every WOODCO E-ZEE Loc Window Unit is manufactured of Kiln Dried Ponderosa Pine, toxic treated to prevent decay, and water-repellent treated to reduce swelling and shrinking. Each unit is delivered to the building site completely assembled for quick and economical installation.

For your nearest Distributor or other information write to

Woodco® Windows

WOODCO CORPORATION, *Miami 47, Florida*

E-ZEE LOC AWNING WINDOWS, *Miami 47, Florida*

ROCKWELL of RANDOLPH, Inc. *(Wholesale Millwork Div.) Randolph, Wisc.*

WOODCO CORPORATION DISTRIBUTING DIVISIONS

NORTH BERGEN, N. J. • • • • • • • • • • • • • • • SCHENECTADY 3, N. Y. • • • • • • • • • • • • • • • LOWELL, MASS.

another modern corridor with "invisible" door closers

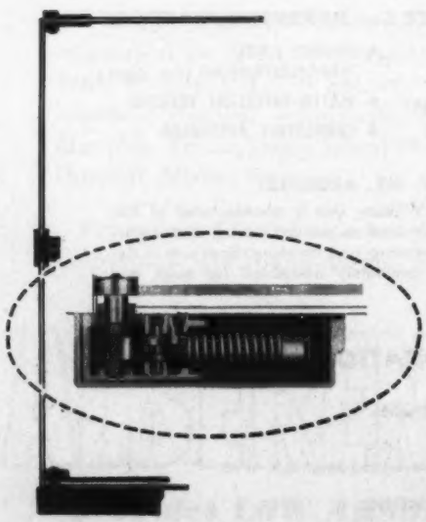
RIXSON

UNI•CHECKS®

Strong, trouble-free, shallow door closers . . . firmly embedded in the rigid floor . . . no arms or closer mechanisms visible on either side. Easy to install or adjust. Write for complete details.



The City-County Building, Detroit, Michigan
HARLEY, ELLINGTON AND DAY, INC., Architects



ideal for *school classroom doors • hospital patient room doors • hotel guest room doors • office building and factory interior doors . . .*

THE OSCAR C. RIXSON COMPANY
9100 west belmont ave. • franklin park. ill.

Complete roof drainage systems now available

in Armco Stainless Steel



Lifetime Investment

When properly installed, roof drainage systems made of Armco Stainless Steel should last as long as the building. Yet first cost is generally less than other high quality roof drainage products.

Highest Strength

When you specify Armco 17-7 Stainless Steel for roof drainage you get the strongest metal used for this purpose. Gutters withstand heavy loads of ice and snow without sagging—resist buckling and cracking due to extreme temperature changes.

Blends with Surroundings

The soft, subdued finish of Armco Stainless Steel for roof drainage harmonizes well with any other building material or color scheme.

No Patina to Stain

There is neither rust nor patina to wash off on painted woodwork or masonry in completely stainless steel roof drainage systems. This means fewer repainting and cleaning jobs, much lower upkeep costs.

Easy to Install

Any good sheet metal man can install standard Armco Stainless Steel valley, guttering and conductor pipe. Flat strip is readily available for fabrication into special designs. Parts solder readily, producing strong clean joints.

Flashing and Accessories too

In a stainless steel roof drainage system, flashing should be made of stainless steel strip, and to prevent stains from corrosion of other metal, all accessories should be of stainless steel too. These include hangers, hooks, nails, rivets, screws, cleats and bolts.

Use the Coupon

For complete information, specification details and sources of supply, just fill out the coupon and mail it to us.

Armco Steel Corporation, 1635 Curtis Street, Middletown, Ohio
Send me your A.I.A. folder, "Stainless Steel Roof Drainage" ☐
Give me names of the nearest suppliers of Armco Stainless Steel roof drainage items ☐

Name:_____
Firm:_____
Street:_____
City:_____ Zone:____ State:_____
Signature:_____

ARMCO STEEL CORPORATION 1635 CURTIS ST., MIDDLETOWN, OHIO

SPECIAL STEELS

SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



This new Streamliner 400

...has wide versatility, big capacity

...compact in size, low in cost

The new STREAMLINER 400 was designed to process any type of print, on any material, in a range of sizes up to 42" in width. It prints at speeds of from 1 to 24 feet a minute.

Low in cost, economical to operate, the Streamliner 400 is loaded with new features, and has no competition with any whiteprinter in its price class.

This new model has the following outstanding advantages:

Synchronized printing & developing . . . permitting continuous operation with roll stock.

Speed control . . . for quick, positive changes of running speed, from 1 to 24 feet per minute.

Instant reversal . . . easy to correct alignment errors, and permits removal of extraneous materials.

Tempered plate glass feedboard . . . gives operator clear view of stacking.

New mercury vapor lamp . . . is more efficient, and has a balanced cooling system that assures uniform exposure.

Pressurized evaporator tube . . . with automatic controls, provides uniform developing, at top speed.

Developer control dial . . . can be manually set for the best developing of any sensitized material.

Positive pickoff . . . plastic fingers lift prints off printing cylinder.

Exhaust timer . . . blows off heat and vapors after operation has stopped.

THE basic simplicity of design and construction also results in minimum maintenance. For any company which requires versatility *and* capacity, the 400 can show definite savings in time and print costs. And its price will not bulge your budget.

Ask the nearest Ozalid distributor *(see phone book)* for a demonstration. Or write for details to 305 Ozaway, Johnson City, N. Y.

OZALID – A Division of General Aniline & Film Corporation . . . *From Research to Reality*

OZALID

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 334)

It is expected there will also be further effort to get additional funds for the Bureau of Labor Statistics for revision and expansion of its construction statistics.

LEASE-PURCHASE APPROVALS REACH $91.5 MILLION MARK

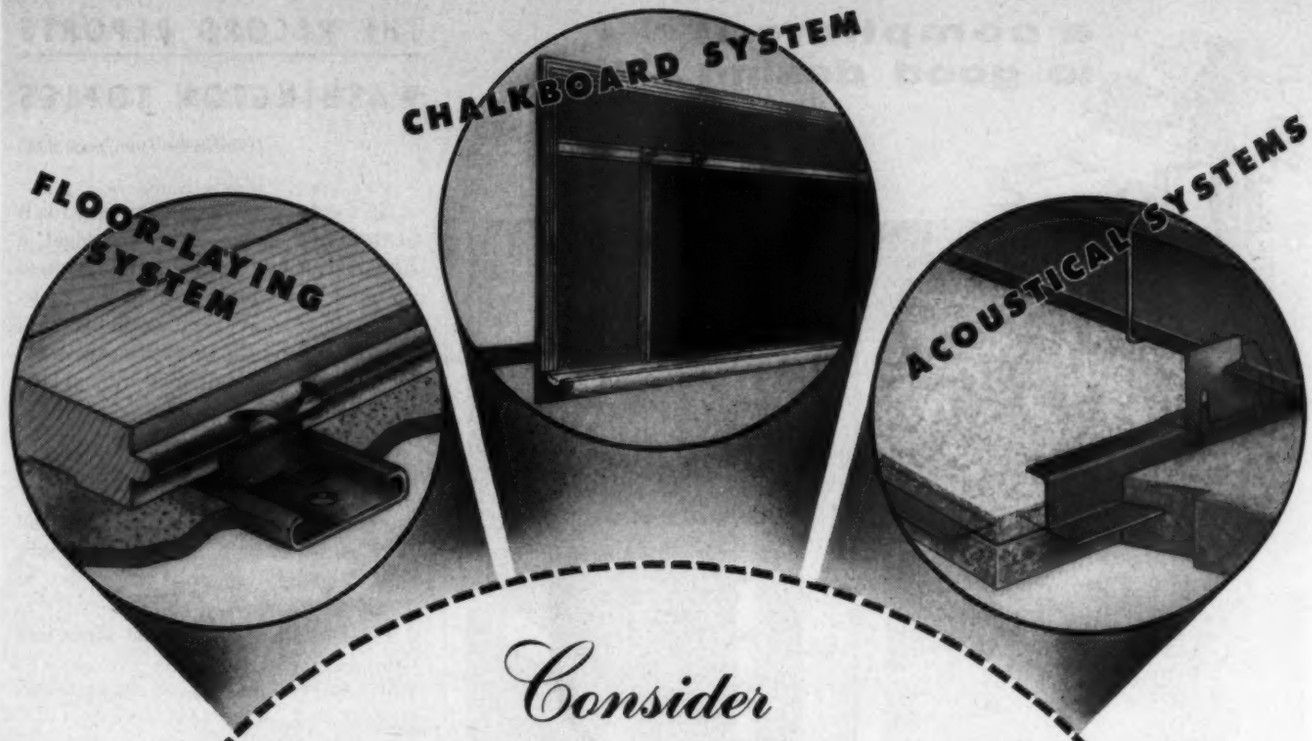
Twenty-six projects totaling $91.5 million submitted by the General Services Administration to House and Senate public works committees have been approved for construction under the Federal government's lease-purchase program initiated in legislation passed a year ago.

Some $100 million in lease purchase projects had been submitted by GSA for Congressional approval before adjournment, and GSA estimates that an additional $150 million will be submitted by the time Congress reconvenes in January, making a total of $250 million through June 30, 1956.

(Continued on page 340)

GSA REPORT AWAITED

The General Services Administration last month was uncertain when it would be possible to release the report of the eight-man construction industry advisory committee it appointed last November to review its construction standards. The report of the group, which had been asked to examine Public Buildings Service standards and practices "in the light of good private practice," was submitted to GSA in May. Members of the advisory group, with their fields of experience, were: architecture — Earl H. Lundin, New York, and George M. Ewing, Philadelphia; engineering — Albert L. Baum, Tage Pearson and Archie M. Erickson, all of New York; contracting — N. J. Pescatore, New York, and John J. McDermott, Washington, D. C.; building management — Earl Schultz, Chicago, and W. E. Reynolds, former Commissioner of Public Buildings, as consultant.



Consider
the advantages offered by the

LOXIT "BIG 3"

Everything locks together — LOXIT

There's a definite place for these three BIG Loxit Systems in your plans. They simplify design and construction problems, meet unusual conditions, assure permanent beauty and reduce maintenance costs. All these Loxit Systems have one thing in common: they are simple in principle. Because of this, they are easy to erect and assure years of trouble-free service. Consider these advantages in your own planning.

LOXIT FLOOR-LAYING SYSTEM

A simple and practical mechanical system which definitely solves the problem of wood floors laid on concrete slabs. The flooring is laid in the same way that a nailed wood floor would be laid, but instead of using nails to fasten the flooring, a cleverly designed metal clip is used in combination with a metal channel. The clips are slotted to adjust themselves automatically to the tongue and groove of the flooring. No wood sleepers. No wood subfloor. No adhesives. No nails.

LOXIT CHALKBOARD SYSTEM

Here is a COMPLETE system which provides the answers to all your chalkboard problems. It includes a full range of chalkboards: LOXIT Rite Green and Darkrite Green Chalkboards, KOMPO-CITE Chalkboards, PETRALOX Cement-Asbestos Chalkboards, and PORCELOX Porcelain Steel Chalkboards . . . completely trimmed Chalkboards and Tackboards ready to hang . . . LOXIKORK Tackboards . . . LOXIT TRU-SNAP All-Aluminum Trim for both plastered-in and surface-applied installations . . . Sliding Boards, Trophy Cases, Bulletin Boards—a complete package.

LOXIT VICTORY ACOUSTICAL SYSTEM

The "XYZ" of dependable acoustical suspension systems. Type "X" Regular —to be used when furring channels serve as the supporting structural members for the suspension system. Type "Y" Surface-Applied—to be used when no suspension is required, the tiles being applied directly to the ceiling. Type "Z" combines Types "X" and "Y" to meet special conditions.

Literature, samples and catalogs are available.



Ask your architect; his training and experience assure you good design and good construction at the right cost.

LOXIT SYSTEMS, INC. 1217 W. WASHINGTON BLVD. CHICAGO 7, ILLINOIS



the NEW

ROTO-GLO®

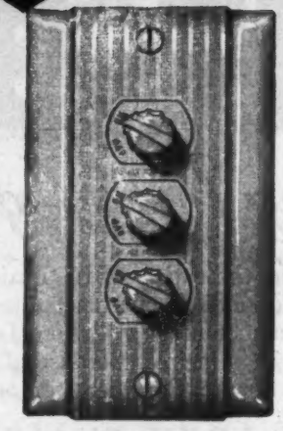
quiet switch

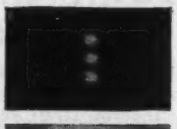
because switches should be seen
. . . not HEARD!

ROTO-GLO announces an all-time high in switch performance and appearance by offering you two big design advantages to compliment your plans. For now ROTO-GLO combines the most technically modern roto switch mechanism with handsome interior styling.

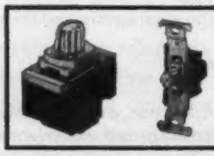
Everyone likes the whisper quiet operation . . . the luminous knobs that glow in the dark . . . and the gentle one-quarter turn of the knob that turns lights off and on (like a modern radio or TV switch).

What's more, you can specify ROTO-GLO with complete confidence in the long-wearing quality construction. The all-enclosed plastic body and non-oxidizing silver alloy contacts assure years of trouble-free operation. And ROTO-GLO switches can be used to full current rating on incandescent and fluorescent loads.

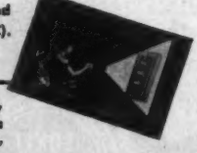








Available in P&S Despard Type (15A, 120V AC, 277V AC) for combination wiring, and in conventional strap type (15A, 120V AC).



Get the complete ROTO-GLO story. Write today for a free copy of "Modern Electrical Living" a comprehensive 24 page booklet on wiring devices, to Dept. AR-2:

P&S PASS & SEYMOUR, INC.

Syracuse 9, N. Y. • 71 Murray St., New York 7, N. Y. • 1229 W. Washington Blvd., Chicago 7, Ill.

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 338*)

GSA got the $15 million sought for it in the President's fiscal 1956 budget, a sum officials had testified would be used for sites and planning of 47 lease-purchase projects having an ultimate cost of $247.4 million. This includes about 23 locations at which either additional land or new sites will be required.

The 26 projects so far given the Congressional go-ahead (with architects where released):

Rock Island, Ill. — post office and courthouse, $2 million; William Spuhr & J. Fletcher Langton, and John N. Ziegle & Associates, architects.

Council Bluffs, Ia. — post office and courthouse, $1.6 million; Robert C. Robinson, architect; Brooks-Borg, architects and engineers.

Kansas City — post office and courthouse, $2.3 million.

Lake Charles, La. — post office and courthouse, $2.1 million; Dunn & Quinn, architects.

St. Paul — post office and custom house, $5.2 million.

Albuquerque — Federal office building, $6.2 million.

Jamestown, N. Y. — post office and courthouse, $1.8 million.

Kingsport, Tenn. — post office, $1 million.

Abingdon, Va. — post office and courthouse, $543,210.

Huntington, W. Va. — Federal office building, $3.2 million.

Green Bay, Wis. — post office and courthouse, $1.6 million; Foeller, Schober, Berners, Stafford & Jahn, architects.

Atlanta — communicable disease center, $12.3 million.

Brunswick, Ga. — post office and courthouse, $1.4 million.

Burlington, Ia. — post office with additional office space, $1.3 million.

Lafayette, La. — post office, $1.95 million.

Minneapolis — courthouse and Federal office building, $5.9 million.

Biloxi, Miss. — post office and courthouse, $1.1 million.

Omaha — post office and courthouse, $9.6 million.

Durham, N. H. — post office, $4.3 million.

New York — office building for U. S. Mission to the United Nations, $3.3 million.

(*Continued on page 344*)



Design For Modern Home Entrance by The Architects Collaborative

"WHAT A WEALTH OF COLOR AND SERVICE CERAMIC TILE GIVES...INSIDE AND OUT."

Walter Gropius

For The Architects Collaborative

Architect Walter Gropius and his TAC colleagues captured the beauty and practical nature of ceramic tile in this forward looking home entrance and patio. Making the most of their material, they compel ceramic tile to contribute the maximum in design and service.

This project shows graphically the wide range of colors, surface textures and unit sizes available in ceramic tile. Note the heavy duty floor tiles on the patio . . . the matte finish glazed tiles on the exterior sidewall . . . and the small floor units surfacing the decorative pool. They all resist water, wear and weather.

Ceramic tile surfaces can help you put your clients miles ahead on maintenance, too. Tile floors, walls and counter tops never need strenuous cleaning, waxing, painting or replacement.

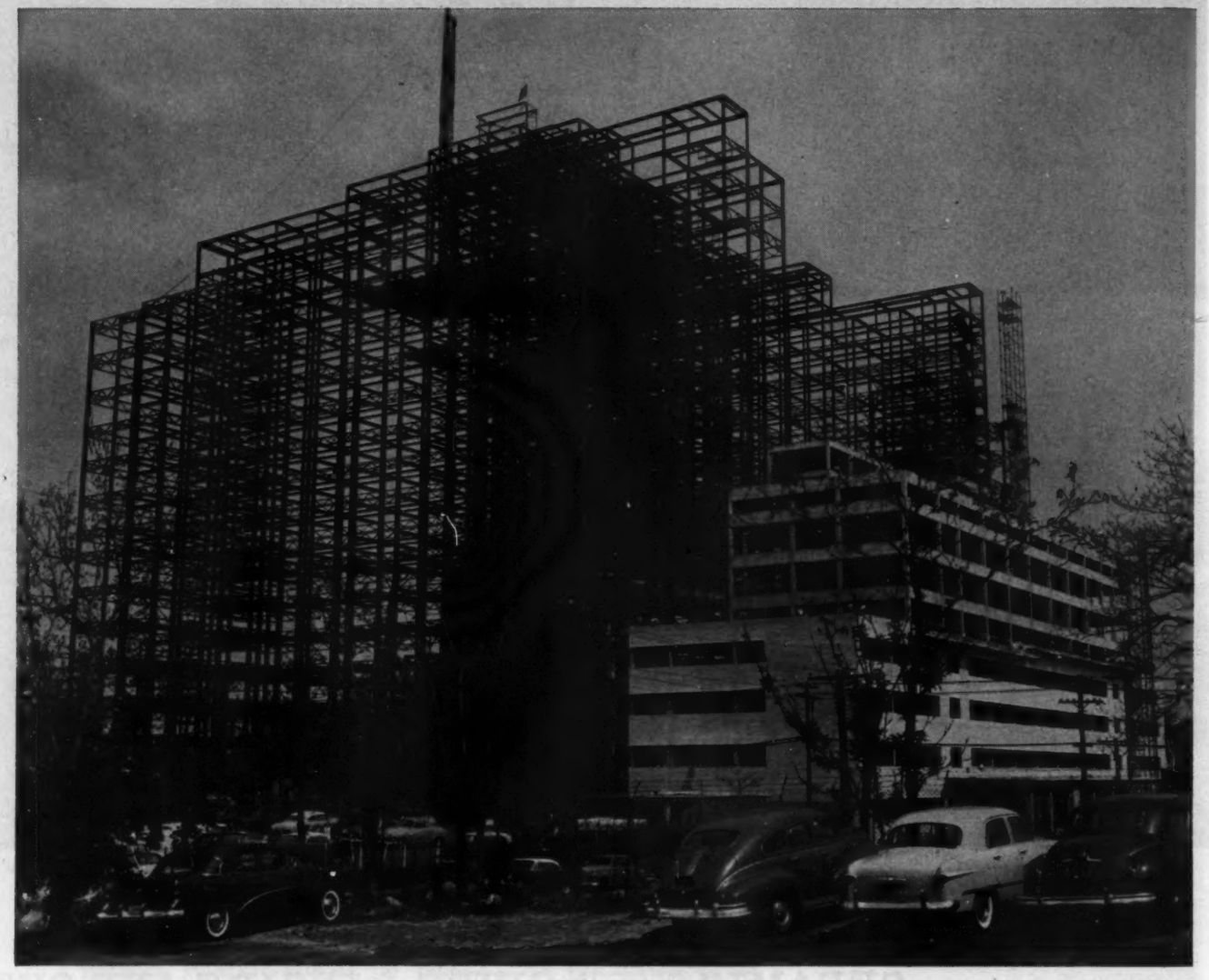
When you plan your next residential, commercial or institutional project, remember you can save your client future maintenance expense. In addition, you can give the distinction of custom installations by the imaginative use of standard ceramic tiles.

The Modern Style is

CERAMIC tile

TILE COUNCIL OF AMERICA, Room 3401, 10 East 40th St., N.Y. 16, N.Y. or Room 933, 727 W. 7th St., Los Angeles, Calif.

PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Mfg. Co. B. Mifflin Hood Co. • Cambridge Tile Mfg. Co. • Carlyle Tile Co. • General Tile Co. • Gladding, McBean & Co. • Jordan Tile Mfg. Co. Mosaic Tile Company • Murray Tile Co., Inc. • National Tile & Mfg. Co. • Olean Tile Co. • Pomona Tile Mfg. Co. • Robertson Mfg. Co. Royal Tile Manufacturing Co. • Sparta Ceramic Co. • Summitville Tiles, Inc. • United States Ceramic Tile Co. • Winburn Tile Mfg. Co.

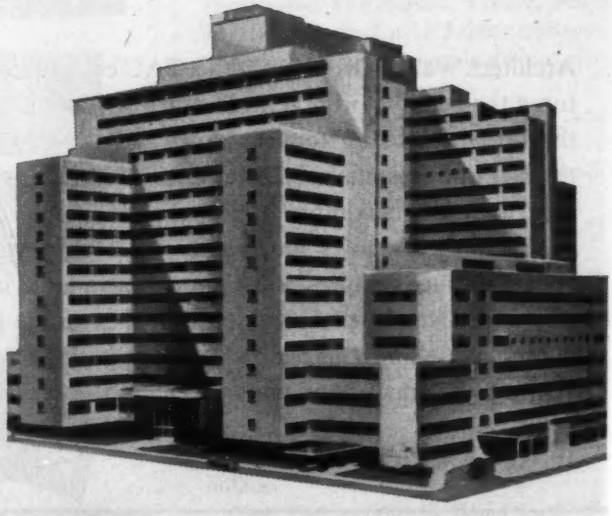


Steelwork Completed for Atlanta Medical Center

Grady Memorial Hospital, at Atlanta, is to be one of the largest and most complete medical centers in the Southeast. Its 7000-ton steel framework, fabricated and erected by Bethlehem, was topped out the day this picture was taken.

The main portion of the hospital, designed for the care of general surgical and medical patients, varies between 19 and 21 stories in height. The lower wing to the right provides modern out-patient clinics, a large emergency department and other clinics. The entire structure comprises a gross area of 1,000,000 sq ft, nominally rated at 1000-bed capacity.

The project is an undertaking of the Fulton-DeKalb Hospital Authority. *General Contractor:* Robert E. McKee, Inc., Dallas, Tex. *Architects and Engineers:* Robert & Company Associates, Atlanta.



Model of the completed Grady Memorial Hospital, Atlanta

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

GENUINE MARKWA

marble tile

FOR WALLS AND FLOORS

At last, for the first time, magnificent marble, with all its lustrous beauty and vibrant color, is now available in lightweight, half-inch thinness for walls or floors.

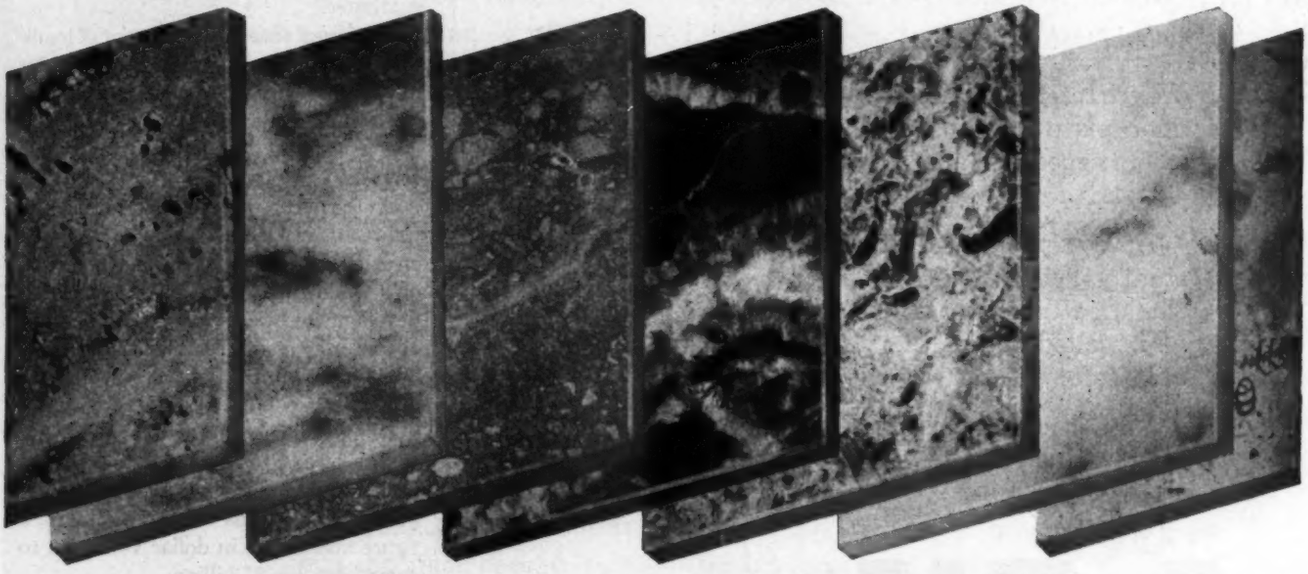
Here are the facts:

MARKWA marble wall tile is a true quarried marble, produced exclusively by America's foremost marble producer and fabricator, the Vermont Marble Company.

MARKWA marble wall tile is half the thickness and half the weight of conventional marble slabs — ½ inch thick, 7½ lbs. per square foot. It is cut to three sizes: 8″ x 8″, 8″ x 12″, and 12″ x 12″ (less 3/32 inch joint allowance to provide for *Modular Measure*). **MARKWA** is absolutely flat, uniform in size and thickness to a close tolerance of 1/16 inch. It is set by tile layers in exactly the same manner as clay tile, either with mortar or by adhesion.

MARKWA marble wall tile costs as little as $2.85 per square foot set in the wall depending on variety of marble and type of installation. It is stocked in a wide variety and color range.

MARKWA marble wall tile is ideal for wall or floor, in bathroom, kitchen, living room or foyer, for countertops or fireplace facings, in residential or commercial buildings, for interior or exterior. It comes polished with cushion edges; matte finish available for floors and exterior walls.



HOW MUCH DOES IT COST? So little more than clay tile that a typical bathroom installation could be made in MARKWA for less than a hundred dollars more. How little that is in terms of the *added value* that marble provides.

WHERE DO YOU GET IT? Most tile contractors either have it or can get it. Or contact any of the 12 Vermont Marble Company branches listed below.

SEE MARKWA NOW! *Specify it for your next job. Write for complete specification data.*

MARBLE MARKWA WALL TILE

The quarried marble that is lightweight because it is thin.



Produced exclusively by the VERMONT MARBLE COMPANY, PROCTOR, VERMONT.
BRANCH OFFICES: BOSTON CHICAGO CLEVELAND DALLAS HOUSTON PHILADELPHIA LOS ANGELES NEW YORK SAN FRANCISCO IN CANADA: ONTARIO MARBLE COMPANY, LIMITED, TORONTO AND PETERBOROUGH. ONTARIO CONTINENTAL MARBLE COMPANY, LIMITED, VANCOUVER, B.C.

One-half actual size



men and machines move safely over • LOW-COST • LONG-LASTING A.W. SUPER-DIAMOND

Rolled Steel Floor Plate

Where safety and economy are "musts"—no other floor plate can match SUPER-DIAMOND's rolled steel ruggedness and easy maintenance for so low a cost.

At every step 40 steel diamonds guard constantly against skids and slips. This non-directional pattern floor plate fabricates easily . . . can be installed overnight . . . gives years of dependable safety under the heaviest industrial loads.

Mail coupon for full details on this low-cost, long-lasting rolled steel floor plate.

A.W. SUPER-DIAMOND ROLLED STEEL FLOOR PLATE

"The diamond in the rough . . . a gem of a flooring."

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. SUPER-DIAMOND Booklet SD-2

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

Other products: A.W. ALGRIP Abrasive Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

For plants where oil, water and grease raise special problems of slipping accidents, we suggest a check on the special qualities of A.W. ALGRIP . . . the world's only abrasive rolled steel flooring.

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 340*)

Carthage, Tenn. — post office, $272,000.

Gainesville, Tex. — post office, $645,036.

Burlington, Vt. — post office and courthouse, $2.8 million.

Richmond, Va. — office building, $7.4 million.

Parkersburg, W. Va. — post office and office building, $1.7 million.

New Orleans — post office and Federal office building, $14.2 million.

U. S. TIGHTENS HOME CREDIT AS MILD "INFLATION" BRAKE

In actions described as "precautionary" against possible inflation dangers, the Federal Housing Administration and the Veterans Administration on July 30 issued new regulations requiring faster repayment of future home loans and eliminating the no-down-payment loan guarantee.

Maximum time for repayment of loans was reduced by both agencies from 30 to 25 years. VA set a minimum of two per cent down payment and FHA raised its requirement from five to seven per cent.

On the part of the Administration, the tightening of credit was attributed to increasing concern about the rising volume of home owners' debt and the possible development of a serious over-extension of consumer credit, as well as indications of a "slight but rising trend" in the cost of houses.

Home builders and realtors were quick to dissent and to warn that the Federal action could reduce housing output next year by as many as 100,000 dwellings, a figure amounting in dollar valuation to something like $1 billion.

Both the National Association of Home Builders and the National Association of Real Estate Boards called the new restrictions "completely unwarranted" and "a backward step" in the program to supply middle and low-income families with "decent housing." They were threatening to open a campaign to persuade Congress next year to confer independence on FHA to divorce the agency from what they regard as "political control."

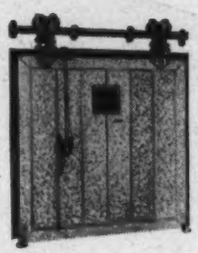
The two organizations planned to "study" the question in any case as a result of this year's Congressional action separating the Home Loan Bank Board

(*Continued on page 348*)

How much have you been missing by not using JAMISON'S extra services?

You may already know of the efficient performance of Jamison Cold Storage Doors . . . their ease of opening . . . their low maintenance. But do you know that Jamison also offers four valuable services unmatched in the industry?

JAMISON DESIGNS AND BUILDS ALL KINDS OF SPECIAL DOORS



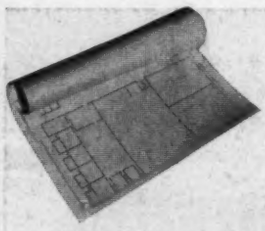
A full-time research and engineering staff enables Jamison to design and build doors for practically any special requirement. Many times, all that's needed is to modify a standard door. Whatever the need, Jamison is equipped and prepared to build any door to your order.

JAMISON HELPS CONTRACTORS TO QUOTE ON DOORS



Upon request, a Jamison representative will call upon the architect, and take off the door specifications the insulation contractor needs to quote on a job. He'll then help to interpret specifications and supply the contractor with quotations on the specified doors and any alternates that can be offered.

JAMISON ASSISTS ARCHITECTS IN PREPARING LAYOUTS



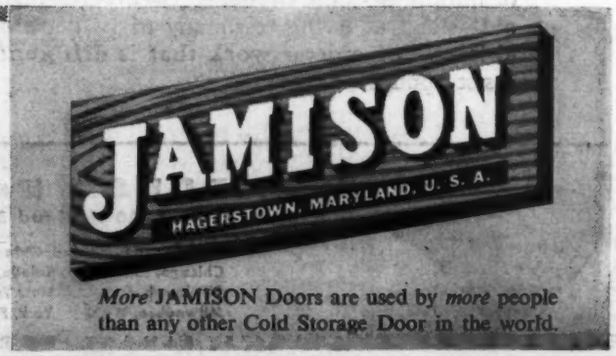
Jamison field representatives throughout the country are always available to work with architects in preparing layouts. They will help with the specifications to insure that the right door is used as well as the one most economical for the job.

JAMISON HELPS CONTRACTORS ON UNUSUAL SERVICE PROBLEMS

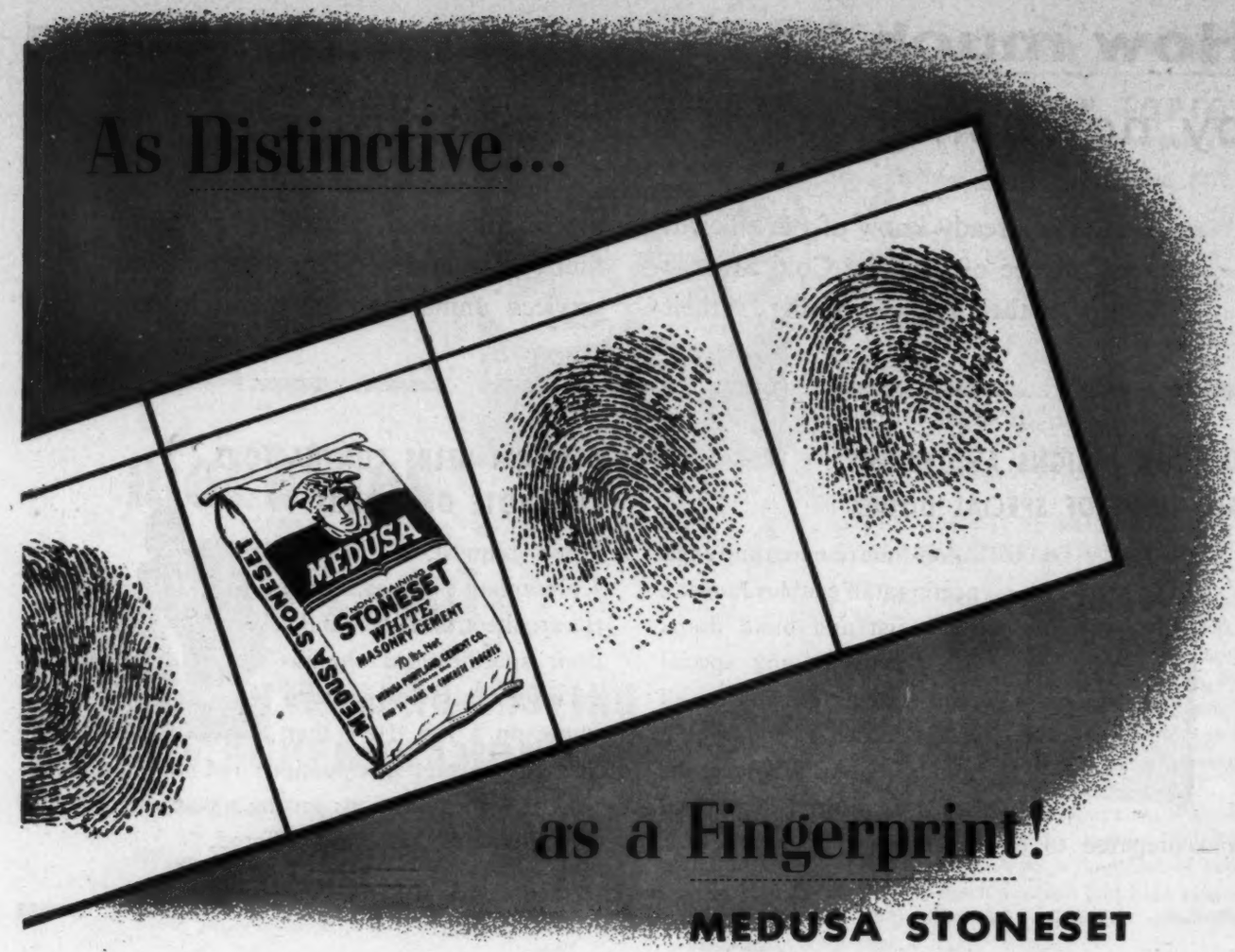


Jamison representatives work with contractors to provide the user the best possible service. Advice and suggestions on installing doors can frequently save service cost and trouble. Help is also available on unusual service problems.

You can depend on Jamison for both a quality product and technical service. Jamison Doors have been the standard of comparison for nearly 50 years. Jamison field service can save you time, money and worry. JAMISON COLD STORAGE DOOR COMPANY, HAGERSTOWN, MD., U.S.A.



More JAMISON Doors are used by *more* people than any other Cold Storage Door in the world.



MEDUSA STONESET
White Masonry Cement

Experts say every fingerprint is different—and we say Medusa StoneseT Mortar Cement is as distinctive as fingerprints! It's the only white masonry cement made from world-famed Medusa White Portland Cement. As a result of this difference . . . this whiteness . . . wonderful things happen to masonry when you specify Medusa StoneseT White Masonry Cement. The unstained, uniformly white mortar joints give your masonry units a far more beautiful appearance. And Medusa StoneseT properly tinted makes mortar that harmonizes perfectly with the exact color of the face brick, stone, marble or glass block units you are using.

But the best part is, you can absolutely depend upon Medusa StoneseT . . . Thousands of buildings—some twenty to twenty-five years old—stand as living testimony of its dependability. For mortar work that is different, insist upon StoneseT.



North Oshawa Public School, Oshawa, Canada

MEDUSA Portland Cement Company

1000 Midland Building • Cleveland 15, Ohio

SALES OFFICES
Cleveland, Ohio
Chicago, Illinois — Toledo, Ohio
Pittsburgh, Pa. — New York, N. Y.
Milwaukee, Wisc. — York, Pennsylvania

WHITE • WATERPROOFED WHITE • GRAY
WATERPROOFED GRAY • AIR ENTRAINING • STONESET
HIGH EARLY STRENGTH • BRIKSET
WHITE TILE GROUT CEMENT

MAKERS OF AMERICA'S FINEST PORTLAND CEMENTS FOR OVER SIXTY YEARS

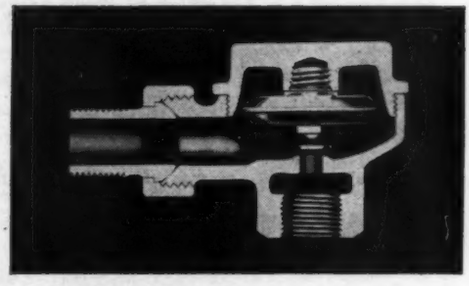


See for yourself why you don't replace seats in Dunham Traps

A glance at this photograph quickly tells the entire story. Dunham's flat valve disc closes *flush* against the trap seat. Since Dunham's flat disc does not fit *into* the seat . . . isn't tapered or conical . . . there's less chance for erosion, wear or wire-drawing.

Dunham Radiator Traps always assure easy passage of air, water and foreign matter. No clogging. Extra-large, non-clogging seat opening is unrestricted by any guide. There are no bellows to stick, no field adjustments to make.

Steam Specialties are our specialty . . . and have been since we perfected the first commercially successful thermostatic trap over 50 years ago. Next time you need anything at all in the steam specialties line, do as so many have done for so long—*Depend on Dunham for all your needs.*



Dunham Radiator Trap
3 sizes: 6 patterns; to 700 EDR

Clip and mail coupon for full information

DUNHAM **HEATING & COOLING EQUIPMENT**

RADIATION • CONTROLS • UNIT HEATERS • PUMPS • SPECIALTIES
QUALITY FIRST FOR OVER FIFTY YEARS
C. A. DUNHAM COMPANY • CHICAGO • TORONTO • LONDON

C. A. DUNHAM COMPANY
Dept. AR-9, 400 W. Madison St., Chicago 6, Ill.
Send literature on Steam Specialties line

Name_____

Firm_____

Address_____

City_____ Zone____ State_____

How To Specify An Abrasive Tread

that will last the life of your building

clip and file

There are four factors that make an abrasive metal tread safe *and* durable: (1) Weight of the abrasive granules per square foot, (2) size of the granules, (3) uniformity of distribution, (4) average number of granules per representative square.

Feralun abrasive metal treads are quality-designed and made. They have a full measure of non-slip granules. And they are cast to last the life of your building. For handy reference, here's a simple short form specification:

Treads, Thresholds, Elevator Door Sills, Floor Plates, Trench Covers – Exposed wearing surface to contain not less than two (2) ounces per square foot of abrasive granules embedded in the top metal surface not less than 1/16 inches while the matrix is in a molten state. Size of non-slip granules shall range from #16 to #24 and distributed uniformly over the surface in such a manner that not less than an average of ninety (90) individual granules can be counted in any three representative 1/2" x 1/2" squares of any portion of the finished surface.

Pattern of finished abrasive surface shall be either "hatched", "fluted" or "plain", as required. Of (Feralun, Alumalun, Bronzalun, Nicalun) non-slip abrasive metal, as fabricated by the American Abrasive Metals Company, Irvington, N. J., or of approved equivalent in kind, quality, function and characteristics.

Why FERALUN provides lasting safety

Here is an unretouched photograph of a *Feralun* tread taken after acid treatment. (Paint is removed and acid is used to eat away the metal base so as to isolate the actual abrasive content of the tread.) Note the full and even distribution of abrasive—for greater safety, longer wear.



Here is an unretouched photograph of an abrasive tread, purchased on the open market of the type often offered as an equal of Feralun, after the identical acid test. Note the meager amount of abrasive and spotty distribution.

SEE SWEETS CATALOG—12b/Am.

FERALUN

AB 128

AMERICAN ABRASIVE METALS CO. • IRVINGTON 11, N. J.

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 344*)

from the Housing and Home Finance Agency. Up to now, HHFA has had supervisory control over the bank board as well as FHA, the Public Housing Administration and other housing agencies. But with the veterans' housing program and now the Home Loan Bank Board out of HHFA jurisdiction, some N.A.H.B. and N.A.R.E.B. officials are ready to renew the old effort to make FHA independent as well.

In the credit-curbing order, HHFA Administrator Albert M. Cole and FHA Commissioner Norman P. Mason said they had seen indications of rising housing prices and shortages of building materials which they regarded as "warning signs of inflationary possibilities."

The U. S. Savings and Loan League had this to say: "The decision of the National Administration to tighten up on FHA and GI loans is a wise and courageous step, and highly desirable in view of the inflationary tendencies which have become evident in home building costs in recent months."

ESTIMATE STATES' PROGRAM 104,000 CLASSROOMS A YEAR

It is estimated that all states are programming for construction approximately 476,000 elementary and secondary classrooms during the period 1954 through 1959, an official in the U. S. Office of Education said last month.

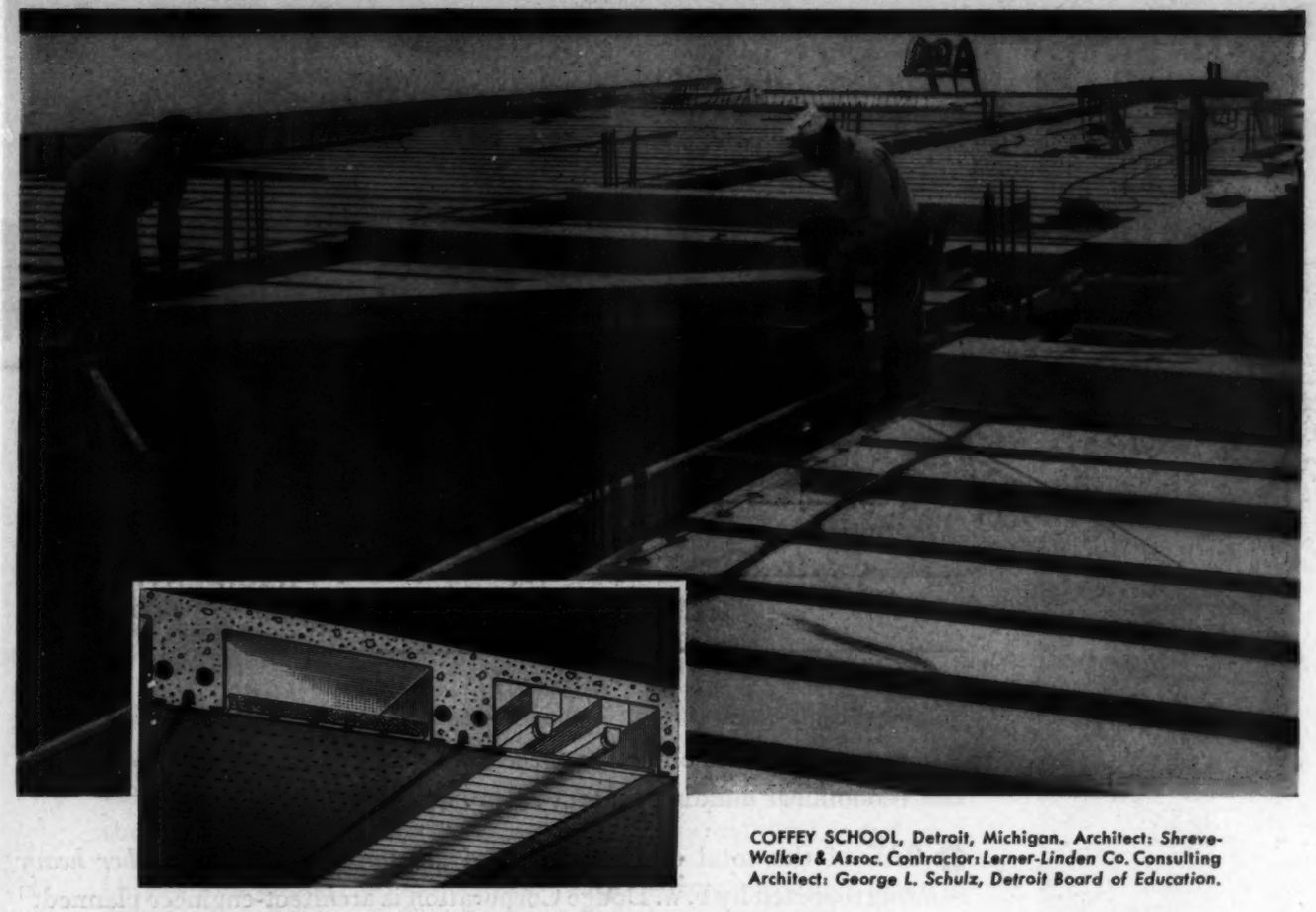
He cautioned that this figure does not represent need, nor does it necessarily represent what states will actually build. It is, however, an estimate of what states are programming, if financial and other difficulties can be overcome.

Through fiscal 1955, the Office of Education estimates that all states have built about 60,000 classrooms. This would leave 416,000 to be built in the remaining four years of the five-year program, or about 104,000 classrooms a year.

The official noted that these figures are based on results of 38 states representing 62 per cent of the nation's enrollment and projected to include all 48 states.

The programmed plans of states for meeting the needs of elementary and secondary school facilities will be soon released by the Office of Education as Phase II of their School Facilities Sur-

(*Continued on page 352*)



COFFEY SCHOOL, Detroit, Michigan. Architect: *Shreve-Walker & Assoc.* Contractor: *Lerner-Linden Co.* Consulting Architect: *George L. Schulz, Detroit Board of Education.*

NEW WAY TO BUILD SCHOOLS . . . FASTER!

Fenestra TROFFER-ACOUSTICAL Panels combine concrete joist forms, built-in acoustical ceilings and recessed lighting troffers

Now you can have better-looking, better-lighted classrooms with fireproof construction and save both time and money. The NEW Fenestra* Troffer-Acoustical Panels—TAC Panels, for short—are designed to wrap up 3 expensive building materials in *one* economical, quickly erected building unit. They permit you to have acoustical treatment and recessed lighting—features that usually require extra time and labor—*built right in the structure itself!*

Here's how it works. As you can see in the photo above, the TAC Panels—either for troffer lighting or metal pan acoustical ceilings—are long-span units. Placed in position on the formwork for the main beams, they provide the forms for the concrete joists and floor slabs. Temporary supports at mid-span while pouring concrete are *all* the additional shoring required. After the concrete is cured, the panels *stay in place* and function as the finished ceiling—complete with built-in acoustical treatment—and as lighting troffers. Only painting and lighting fixture installation are needed to complete the room.

And TAC Panel ceilings are easier to maintain year after year. They can be washed or repainted as often as needed, without affecting the acoustical treatment. There is no hanging ceiling or "stuck on" acoustical material to be damaged or replaced.

Even if your plans are now on the drawing board, they can easily be adapted to use Fenestra TAC Panels. Ask your architect to investigate this new building method, now, or write for a copy of *Fenestra TAC Panel System* that gives you complete details. Detroit Steel Products Co., Dept. AR-9, 2252 East Grand Blvd., Detroit 11, Michigan. *Trademark

Fenestra TAC **TROFFER-ACOUSTICAL BUILDING PANELS**

Patents applied for

Architectural, Residential and Industrial Windows • Metal Building Panels
Electrifloor† • Roof Deck • Hollow Metal Swing and Slide Doors

†®

WHICH BUILDING MARKET

→ NONRESIDENTIAL ☐

→ RESIDENTIAL ☐

→ BOTH ☐

Whatever your sales objective these guideposts point the way to effective and economical building market sales . . .

❶ **97%** of the total dollar volume of all *nonresidential and other heavy building* reported by F.W. Dodge Corporation is architect-engineer planned.(1)

❷ There's an architect involved in **63%** of the total dollar volume of all *houses* reported by F. W. Dodge Corporation.(1)

❸ The lion's share of total architect-designed building is in the hands of the majority of architects who year after year design *both* nonresidential and residential building including . . .

* *close to one-half of all architect-designed nonresidential building*
* *over three-fifths of all architect-designed houses.*(2)

❹ One magazine, Architectural Record, delivers your advertising message to those architects and engineers who are *verifiably* responsible for . . .

* *94% of all architect-designed nonresidential building dollar volume.*
* *73% of all architect-designed residential building dollar volume.*(3)

These valuable aids to effective advertising and selling are available on request

(1) F. W. Dodge Corp. report of "Architect and Engineer Planned Work—1954"

(2) "Analysis of Architect Activity"

(3) Statewide checks of Architectural Record's subscriber galleys against architect activity as reported by F. W. Dodge Corp.

(4) Reader preference folder

E) YOU WANT TO SELL?

One magazine, Architectural Record, offers thriftiest and most efficient coverage of those architects and engineers whose steady specification of your product means sales in *both* the nonresidential and residential building markets.

RE IS WHY...

EDITORIAL BALANCE. The Record's editorial content is continuously *timed* and *balanced* with the aid of *Dodge Reports* to be of maximum value to architects and engineers in terms of the work actually on their boards—nonresidential and residential, small and large.

EDITORIAL CONCENTRATION. Every editorial page—whether dealing with nonresidential or residential buildings (or both)—is edited *specifically* for architects and engineers. And the Record publishes more editorial pages than any other magazine in its field.

UNEQUALED READERSHIP. Architects and engineers have steadily voted Architectural Record their preferred magazine in 70 out of 77 readership studies SPONSORED BY BUILDING PRODUCT MANUFACTURERS AND ADVERTISING AGENCIES.(4)

MORE CIRCULATION WHERE IT IS MOST NEEDED. More architectural firms, more consulting engineering firms, more architects and engineers in commerce and industry will see your advertising message in Architectural Record than in any other architectural magazine.

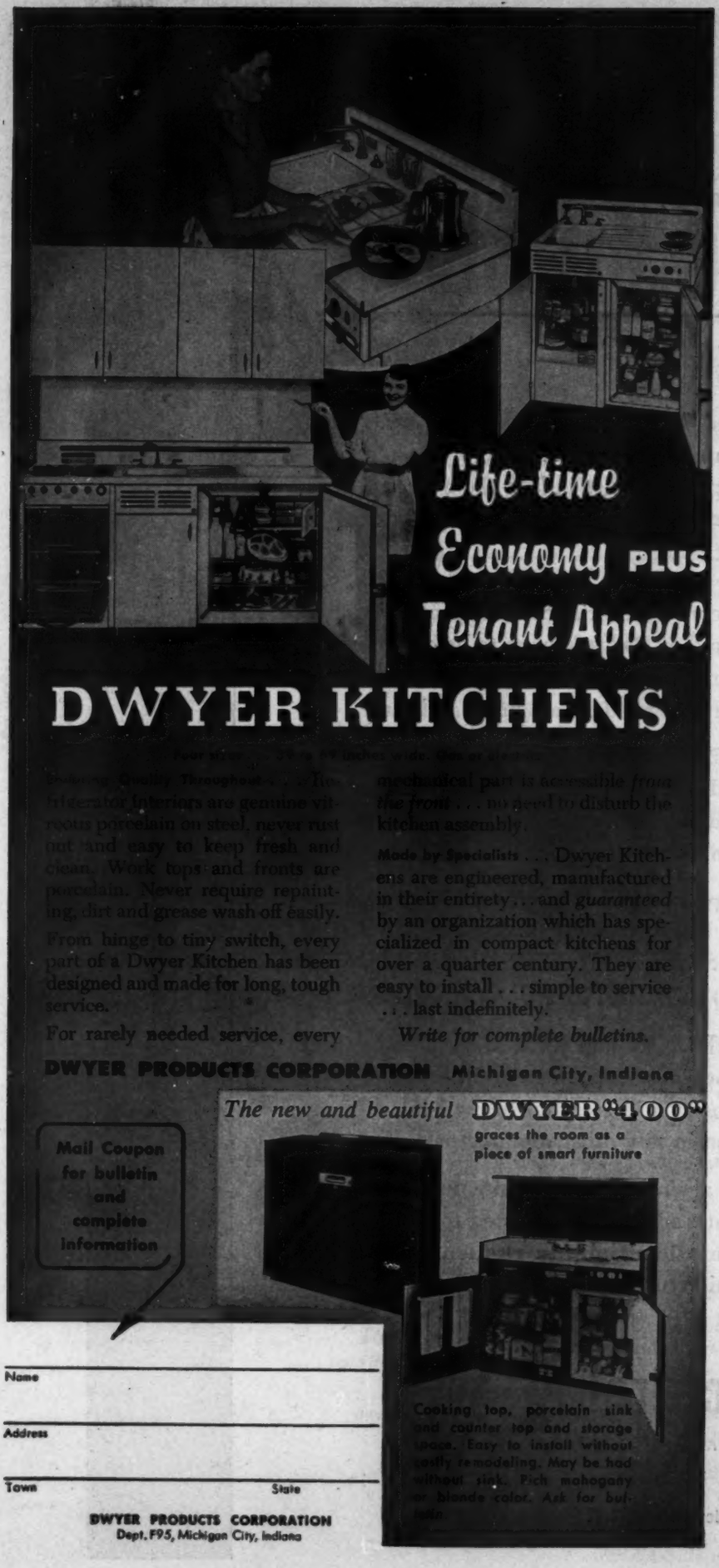
These are the reasons why, again in 1955, Architectural Record is carrying more building product advertising directed to the architect and engineer-designed nonresidential and residential building market than any other architectural magazine.

F.W. DODGE CORPORATION

Architectural Record

"Workbook of the active architect and engineer"

119 West 40th Street, New York 18, N.Y.



THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 348)

vey, which was directed by Congress in September of 1950. The first phase dealt with the status, or inventory, of existing facilities, current needs for facilities, and state and local resources currently available for meeting these needs. Two progress reports were issued in the latter part of 1952.

The second phase concerns itself with state-by-state plans for programs of school plant construction over the next five years. The official said the final report will be ready in about six weeks. Work is under the supervision of Ray L. Hamon, chief of the School Housing Section of the Office of Education.

FEDERAL DESIGN, BUILDING TOO COSTLY: HOOVER STUDY

The cost to the government of its design and construction activities is abnormally high and out of line with the cost of similar work in private industry, according to the Task Force on Real Property Management of the (Hoover) Commission on Organization of the Executive Branch of the Government.

The task force report said this situation results from having so many offices independently engaged in architectural and engineering work; from overstaffed, permanently-retained technical groups; from the many different standards and management practices; and from the absence of operating data which would provide a means of comparing the effectiveness of numerous Federal design and engineering organizations.

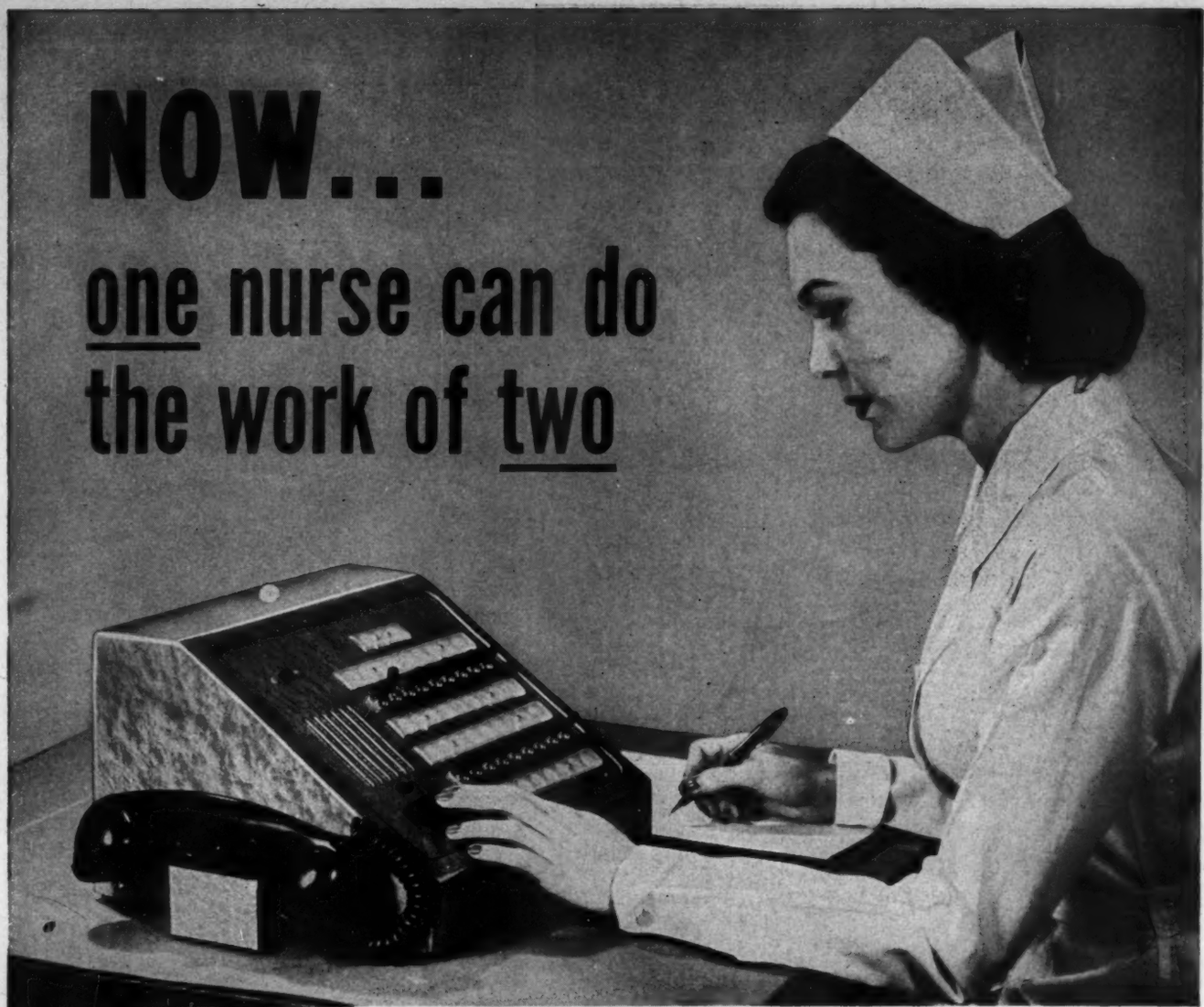
The report discussed Veterans Administration hospital design and construction in some detail and concluded that the General Services Administration, not VA, should control the design of all hospitals regardless of Federal tenancy.

The task force noted that since July 1949, VA had completed 59 new hospitals, now has three under construction, with three more authorized. These new hospitals, plus additions to existing installations, constitute a $900 million program. The program is being curtailed, but VA still retains a design and construction staff of 500, "considerably larger than is needed for the backlog of work," the task force found. "For this reason, there has been a material increase in its cost for the services of

(Continued on page 356)

NOW...

one nurse can do the work of two





WITH THE NEW "VOKALCALL" AUDIO-VISUAL NURSES' CALL SYSTEM

The new "VOKALCALL" now combines in one nurses' call system all the advantages of natural two-way voice communication between patient and nurse, with all the advantages of the time-tested method of utilizing visual and audible signals to call the nurse. With "Vokalcall" the nurse can talk directly to patients without leaving her station, thereby saving herself countless unnecessary trips to bedsides. With "Vokalcall" the nurse can cancel all visual signals originated by patients' calls at *either* her control station or at patients' bedsides. With "Vokalcall" the nurse can "listen in" to each room at any time (with patient's permission) without leaving her station and without disturbance to anyone.

"Vokalcall" doubles the nurse's effectiveness through saved footsteps, ability to attend more patients, greater concentration on direct bedside care, and increased morale and feeling of accomplishment.

Patients like "Vokalcall" too. They benefit from a feeling of security and their needs are known sooner and met faster. To hospitals the tremendous advantage of greater service, reduced operating costs, and increased goodwill are obvious.

SINCE 1892 AUTH

A new booklet entitled "VOKALCALL" tells the whole story. Write:

AUTH ELECTRIC CO., Inc.

34-20 45th STREET, LONG ISLAND CITY 1, NEW YORK.

Where the service is the best... *Tube-Ice* is there!



El Panama Hotel, Panama City, Panama



Hotel Fontainbleau, Miami Beach, Florida



Hartford Statler Hotel, Hartford, Conn.



The Greenbrier, White Sulphur Springs, West Virginia

Hotels that cater to America's smart set consider it good policy to make exceptional service a daily routine.

They've found that such problems as ice making deserve special attention because proper icing enhances both the taste and appearance of food and beverages.

Salads served "garden fresh" with the help of ice . . . cold cuts with that "just sliced" look . . . and beverages that are properly chilled without being "watered down" convey a message to guests that says: "We know you appreciate the finest".

Vogt Tube-Ice is doing the icing job right for fine hotels like these.

Write for descriptive literature.

HENRY VOGT MACHINE CO., LOUISVILLE, KY.

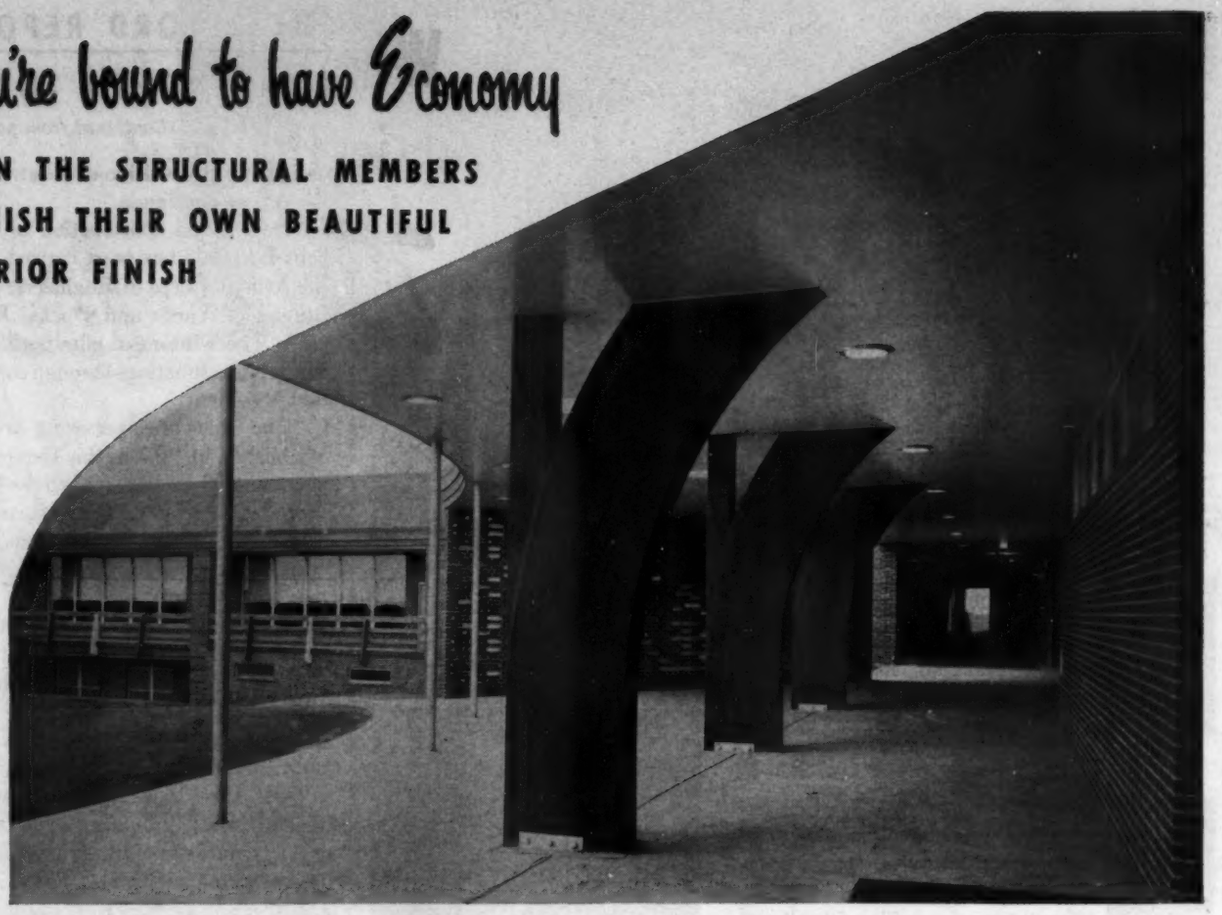
Sales Offices
New York • Philadelphia • Chicago • Cleveland
St. Louis • Cincinnati • Dallas • Charleston, W. Va.
San Francisco

75th Anniversary

Vogt Automatic TUBE-ICE MACHINES

You're bound to have Economy

WHEN THE STRUCTURAL MEMBERS FURNISH THEIR OWN BEAUTIFUL INTERIOR FINISH



Interior or Exterior, Rilco glued laminated members add their own distinct beauty to the structure.

"We selected laminated wood arches for the combination gymnasium-auditorium in Buck's Hill School because we felt that a form of exposed ceiling would be the most economical. By using laminated wood arches and purlins we were able to apply a low cost roof with an acoustical interior finish and have a finished room broken only by the clean lines of the arches."

That's the story in architect Francis L. S. Mayers' own words. It needs no embellishment. The photographs are ample proof how well Mr. Mayers adapted Rilco laminated wood arches and the practical beauty resulting.

Rilco laminated wood members, whether arches, beams or trusses, are as flexible as the imagination of the designer and surprisingly economical. These fire-safe structural members are factory-cut and drilled, furnished with connecting hardware, ready for labor-saving assembly and erection. Rilco field representatives will gladly consult with you about the requirements for your next school, church, commercial or industrial building. *Write for information..*



Built to specifications—securely wrapped—Rilco members need no embellishment to reveal their unusual beauty.

Rilco wood laminated arches of carefully selected woods are built to be seen and enjoyed.



RILCO

works wonders with wood

RILCO LAMINATED PRODUCTS, INC.

2518 FIRST NATIONAL BANK BLDG., ST. PAUL 1, MINN.

Wilkes Barre, Pa., Fort Wayne, Ind., Manhattan, Kans., Tacoma, Wash.

THE REAL LOW-DOWN ON DOWNLIGHTING

Here are the facts...

A Comparative Study of DOWNLIGHTING DEVICES

THE SKYLIKE *Silver-spot* LINE

Provides these outstanding features

1/3 THIRD — LAMP COST...

Lamp replacement costs for most popular types of downlights using reflectorized lamps will approximate three times the cost of lamp replacements for Silver-spot and Silver-dot units.

2/3 THIRDS — POWER COST...

Since many of the commonly used downlight devices employ 150 watt lamps, the 100 watt Silver-spot or Silver-dot units will cost only two thirds as much to operate.

3/3 TIMES — LIGHT OUTPUT...

Performance of downlights varies greatly with design and light distribution. In general Silver-spot and Silver-dot produce more effective footcandles within the designed beam. This increase in illumination averages about three times that afforded by other devices but in some cases exceeds five times the illumination within specified zonal limits.



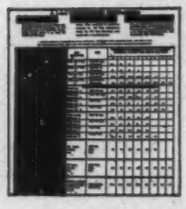
SILVER-SPOT



SILVER- DOT 113



SILVER-DOT 110



THIS COMPLETE REPORT ON DOWNLIGHTING DEVICES yours for the asking

Proof of these facts is definitely established in a comprehensive study just completed. Charts of various types of downlighting devices are based on data taken from photometric tests conducted by Electrical Testing Laboratories, Inc., or from published photometric data. To obtain this report just write to...

Skylike LIGHTING, INC.

A SILVRAY ASSOCIATED COMPANY

BOUND BROOK • NEW JERSEY

THE RECORD REPORTS

WASHINGTON TOPICS

(*Continued from page 352*)

design and supervision of construction," the report continued.

"Design and construction of permanent hospitals has been carried out by the Army's Corps of Engineers, Navy's Bureau of Yards and Docks, VA and GSA. The wisdom of eliminating these overlapping functions through consolidation is evident.

"The Office of Supervising Architect, established in 1853 in the Treasury Department, was transferred to the Federal Works Agency in 1939 by Reorganization Plan I. When the functions of that agency were transferred to GSA in 1949, the personnel from the Office of the Supervising Architect formed the nucleus of the Design and Construction Division of GSA. This group has had a long and varied experience in the design and construction of all types of public buildings. It is the proper unit to control the design of all permanent Federal public buildings, including hospitals, regardless of location or proposed tenant occupancy. The supervision of construction of public buildings should remain with GSA or be allocated to appropriate Executive agencies if required in special situations."

The task force had a bouquet for the Atomic Energy Commission: "If other Federal agencies could attain the operating efficiency of the AEC, the savings to the government in just the cost of design and supervision of construction, on the basis of present volume of business, would be more than $100 million annually."

ADDENDA

Congressional approval of the nomination of Maj.-Gen. John Bragdon as Coordinator of Public Works gave permanent status to a position General Bragdon had been occupying since last fall on a temporary basis. President Eisenhower had urged the need of such a post in the Executive Office of the President to coordinate public works at the local, state and Federal levels.

Construction of a 110-ft bell tower on the Capitol grounds in memory of Senator Robert A. Taft, Republican of Ohio, has been approved by the Congress. Preliminary plans have been prepared by Architect Douglas Orr.

(*Continued on page 360*)



JOB-CAST PANELS speed construction on warehouse, Milwaukee, Wisc. Contr.: Steel-Crete Constr. Co.; designed by V. K. Boynton—both of Milwaukee.

WHY MODERN DESIGN CALLS FOR DURAPLASTIC*



ARCHITECTURAL CONCRETE serves as both structural material and facing at high school, Williamsport, Pa. Contractor: Lundy Construction Co.; Architect: D. H. Grootenboer—both of Williamsport. Engineers: A. W. Lookup Co., Philadelphia, Pa.



DESPITE BELOW-ZERO WEATHER, concrete made with Atlas Duraplastic Cement stays plastic and workable at apartment building, Duluth, Minn. Contractor-Owner: W. C. Smith, Inc.; Architect: A. Reinhold Melander—both of Duluth.

More and more of today's requirements for clean, functional design are being met by concrete construction. And where *better* concrete is important, you'll often find it's made with Atlas Duraplastic air-entraining portland cement.

There's a reason. Duraplastic-made mixes are more workable, more cohesive... place better in forms and around reinforcement. Duraplastic Cement makes concrete with greater plasticity. Result: a more uniform concrete to place.

Atlas Duraplastic Cement requires less mixing water for a given slump . . . reduces water gain and segregation and, therefore, minimizes sand streaking and rock pockets. Result: a more uniform concrete *in* place.

Duraplastic-made concrete adds to concrete durability by fortifying it against the effects of freezing-thawing weather. It is superior for both structural and exposed surfaces.

Yet Duraplastic costs no more than regular cement, requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

OFFICES: *Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.*

**"Duraplastic" is the registered trade-mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.*

ATLAS®

DURAPLASTIC

AIR-ENTRAINING PORTLAND CEMENT



AR-D-171

Makes Better Concrete at No Extra Cost

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station



New Book on Design and Assembly of Modern Furniture by a Famed Master Craftsman

Over 1500 Illustrations Show All Details of Furniture Design and Construction!

Own This Complete Set of 65 New, Ready-to-Build Designs for Beautiful and Tasteful Modern Furniture — and Save 20% of Combined Single Volume Price!

A $12 Value for $9.50

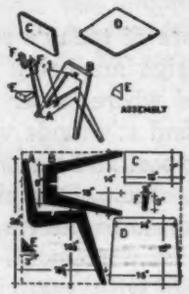
How to Build Modern Furniture

Vol. I: Practical Construction Methods • Vol. II: Design and Assembly... by Mario dal Fabbro

Here is the first complete professional study of modern furniture design ever published. Now offered to architects and designers, these 65 ready-to-build plans will give you scores of interior design ideas, save you long hours of drafting time. All for less than you'd pay a good draftsman to draw plans for a single piece!

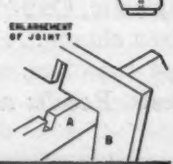


CHAIR



DETAIL 2 FULL SIZE





Practical and Tasteful Designs for Home and Office

With over 1500 diagrams, more than 100 photographs, this 2-volume set covers every phase of furniture construction, from selecting the wood to applying the finish. It includes photographs of attractive room arrangements. Every step is pictured in graphic detail; explanatory text is brief and crystal clear. There are designs for every budget, every taste, every mode of living. For example:

MAGAZINE RACK, TELEPHONE AND TV TABLES, SERVICE BAR, BOOKSHELVES, DESK, COMBINATION DESK AND BOOKSHELF, DINING TABLE, OCCASIONAL CHAIRS, BED, WARDROBE, CHEST-OF-DRAWERS, COFFEE TABLE, LOVESEAT, LAMP TABLE, SIDEBOARD, DROP-FRONT CABINET, ARMCHAIRS, DIVAN, UPHOLSTERED PIECES, plus dozens of other distinctive items of furniture!

Each handsome piece is designed by the gifted Mario dal Fabbro, out of his long experience as a custom designer of furniture in both America and Europe.

Construction Methods Visualized in Detail

Everything you'll ever want to know about designing and building modern furniture is shown in these two books. Mr. dal Fabbro gives you 94 ways to join boards, including the invisible joint. He tells how to apply veneer to flat and curved surfaces. Four ways to attach fabrics to board panels. Secrets of designing drop, folding, and sliding doors. How to attach furniture legs to rails with ten different joints. How to build 25 types of furniture drawers, shown in plan views and side sections.

Then there's a big section on upholstery work. Here you'll see how frames are built, how springs are attached, how fabrics like cotton, muslin, canvas, and foam rubber are fitted and fastened to chair seats and backs. All this is presented in easy, step-by-step fashion, exactly as the work is performed in a master craftsman's workshop.

Yours for 10 Days' Free Examination

We invite you to examine and use this 2-volume set for 10 days entirely free of charge—to judge for yourself its immense practical value. In effect, you get the expert design services of Mario dal Fabbro without risking a penny.

Just fill out and mail the coupon below, and we'll send you the set immediately, postpaid. If you decide to keep the books, send us your check or money-order for only $9.50, a $2.50 saving over the price of both books if purchased singly. Otherwise, simply return the set and owe nothing.

NOTE: Each volume of "How to Build Modern Furniture" may be purchased singly at $6.00. 10-day free examination privilege applies to either book. Check coupon if you want only Volume I OR Volume II.







Mail Coupon Now for 10-Day Free Trial

DODGE BOOKS, F. W. DODGE CORPORATION 821
119 West 40th Street, New York 18, N. Y.

Send me for 10 days FREE EXAMINATION the two-volume set "How to Build Modern Furniture" by Mario dal Fabbro. After 10 days, I will either remit $9.50 (plus a few cents postage) in full payment, or return the books and owe nothing. (Add 3% sales tax for New York City delivery.)

Instead of the complete set, send me only the book checked below at $6.00 (same free examination privilege):

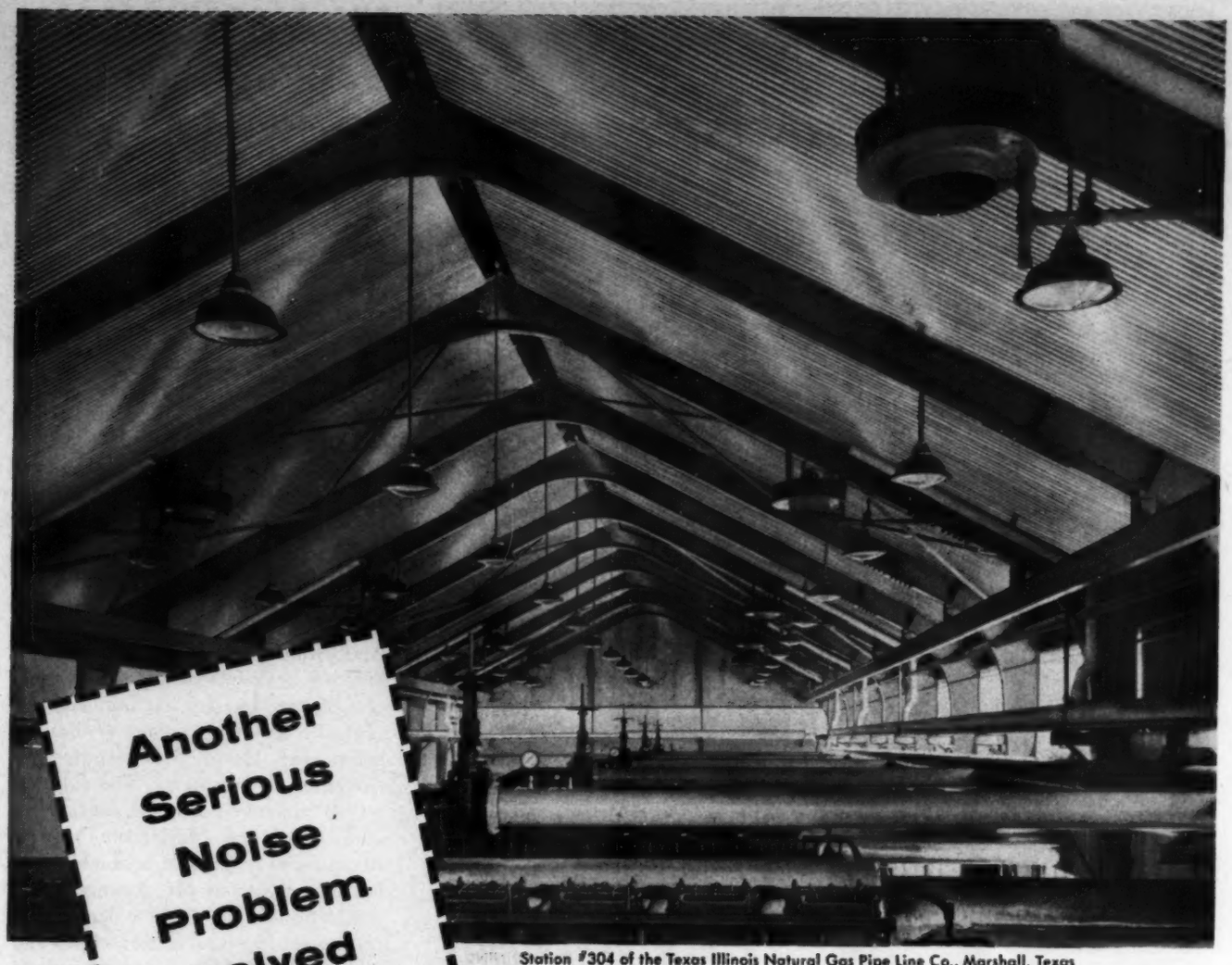
☐ Volume I: Practical Construction Methods
☐ Volume II: Design and Assembly

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

SAVE! If payment accompanies this order, we pay all delivery charges. Same return privilege applies.



Station #304 of the Texas Illinois Natural Gas Pipe Line Co., Marshall, Texas

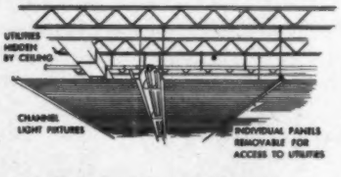
Another Serious Noise Problem solved with

ReynoCoustic

The gas engine-compressor units used in pipe line stations make a terrific noise. Equipment operators subjected to its full force would suffer seriously in comfort and efficiency. The Texas Illinois Company sought the best solution – found it in ReynoCoustic.

This aluminum acoustical system combines maximum sound absorption with long life and minimum maintenance. It has an excellent fire spread rating – Underwriters' Laboratories label on each shipment.

The installation shown is so successful, the Texas Illinois Natural Gas Pipe Line Co. is using ReynoCoustic in seven more stations. Consider this superior treatment wherever you have a noise problem.



In the pipe line station, ReynoCoustic panels were laid on roof girders. Above is a more typical installation—panels laid horizontally on T channels, forming a suspended ceiling with ready access to utilities above. Noise reduction up to .90, uniformly high at all frequencies.

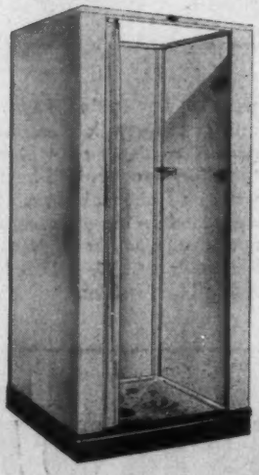
A complete installation service is available. For name of nearest franchised acoustical applicator, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. For complete literature write to Reynolds Metals Company, Building Products Division, 2014 South Ninth Street, Louisville 1, Kentucky.

REYNOLDS ALUMINUM

BUILDING PRODUCTS



Traditional Weisway quality marks every detail of this new Terrazzo shower receptor with these exclusive features: (1) Rim of double strength 18-gauge galvanized, Bonderized steel, with two coats of synthetic baked enamel (2) Pleasing pattern on floor with famous Weisway Foot-Grip, No-Slip surface (3) Invisible protective sealing makes receptor surface impervious to dirt and fully stain resistant. Requires no lead pan... permanently leakproof ... an ideal base for built-up showers with any wall material.



Leakproof Cabinet Shower

New Weisway Standard Terrazzo model has Bonderized, galvanized steel walls with two coats of baked synthetic enamel. Guaranteed leakproof and rust resistant. Easily, quickly installed in new or old buildings. Receptor or complete cabinet available in 36-inch size.

Write now for details and specifications.

Weisway CABINET SHOWERS

HENRY WEIS MFG. CO., INC., *903 Weisway Building, Elkhart, Indiana*

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 356)

The Atomic Energy Commission will build its $10 million new headquarters authorized by the recent session of Congress at Germantown, Md., some 23 miles west of Washington. Voorhees Walker Smith and Smith of New York were selected as architects from 51 firms invited to submit proposals for the work. AEC expects its new building to afford "reasonable protection" against H-bomb attack, and chose a site beyond the immediate "target area" of the capital in conformity with the Federal government's wish to begin the dispersal of some key agencies.

His perennial proposal to create a Department of Urbiculture to deal with urban problems as the Department of Agriculture deals with agricultural problems was again introduced in this session of Congress by Rep. Arthur Younger (D-Cal.) and had a one-day hearing before the House Subcommittee on Government Operations. The subcommittee announced it would continue to study the proposal during the Congressional recess and would hold additional hearings later on. Mr. Younger's bill would transfer to the new department the present functions of the Housing and Home Finance Agency and its Federal Housing Administration, Public Housing Administration, Home Loan Bank Board, Federal National Mortgage Association and National Housing Council.

The Bureau of the Budget has been asked to consider a request for money in next year's budget for study of the effects of earthquakes on buildings. Senator Thomas Kuchel of California has pointed out in a letter to Secretary of Commerce Sinclair Weeks that the program started in the thirties by the U. S. Coast and Geodetic Survey has been severely cut back by lack of funds and has strongly recommended reactivation of intensive studies.

Authority of the Small Business Administration to make loans of not more than $250,000 to small business concerns to build new plants or convert existing ones as well as to finance purchases of land, new equipment and other capital expenditures, was continued by the Congress in one of the last bills passed at this year's session.

(More news on page 362)

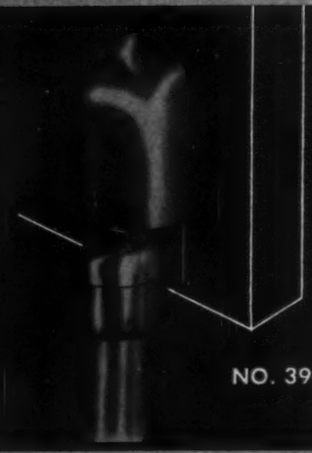
NEW ADJUSTABLE DOOR STOP



NO. 3900
(Was 3504)

- Turret floor strike instantly changes from HOLDER to STOP.
- Strike contour rounded . . . prevents damage to polishing and scrubbing heads of cleaning machines.
- Both THROW and TENSION of roller latch are adjustable.
- Body is "KID-PROOFED"—rounded contours and concealed screws.
- Made of solid corrosion-resistant cast bronze.

No. 3903 Holder-stop is identical to 3900 except turret head is mounted on extra heavy steel pipe. When used on door swinging over steps, pipe is set in concrete.



NO. 3903

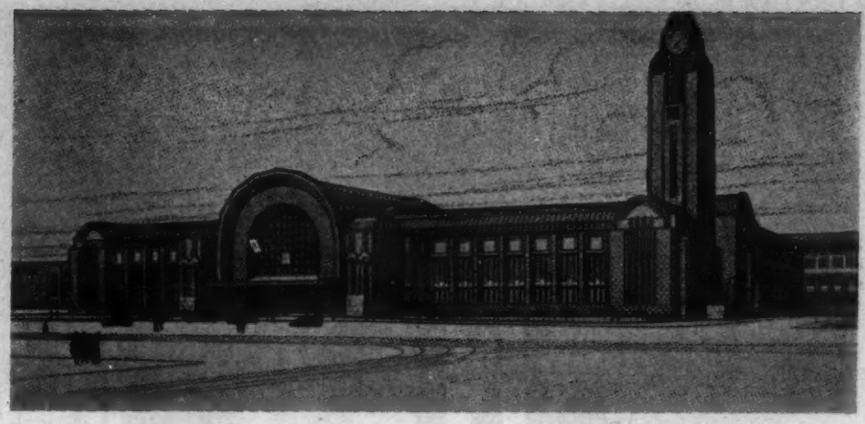
SARGENT & GREENLEAF INC.

ROCHESTER 21, NEW YORK

THE RECORD REPORTS
PERIODICAL REPORTS

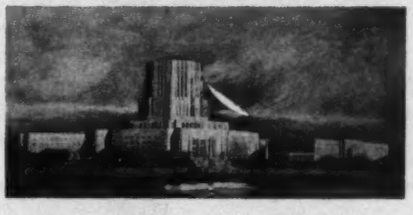
(Continued from page 360)

ARKKITEHTI-ARKITEKTEN, May 1955. The Finnish journal, in connection with a memorial exhibition of Eliel Saarinen's work held in Helsinki this summer, devotes its entire issue to a review of the career of its compatriot. Prof. J. S. Sirén contributes an article on "Saarinen's personality as an artist" and his architectural influence.



Above: Saarinen's rendering of the front elevation for the Helsinki Railway Station, completed in 1914. Below: Hvitträsk, "White Lake," the studio-home which Saarinen shared with his early partners Gesellius and Lindgren; it was built in 1902





Above: the architect's competition project for the Palace of the League of Nations at Geneva, 1927. Below: one of Saarinen's last projects, Christ Church at Minneapolis, which was finished in 1949



(Continued on page 364)

DEPENDABLE

Interior Communications & Fire Alarm Systems

PRIVATE TELEPHONE SYSTEMS
Couch BULLETIN 121

Simple and multiple phone systems for communication between two or up to 200 points.



APARTMENT HOUSE PHONES
Couch BULLETIN 128

Phone systems for communication between apartments, entrances, superintendent, office, trade entrances, garage, etc.



FIRE ALARM SYSTEMS
Couch BULLETIN 124

Manual and automatic fire alarm systems for coded and non-coded applications.



HOSPITAL SIGNALLING
Couch BULLETIN 125

Visual and audio-visual patient- nurse call systems. Staff in-and-out registers and paging systems.



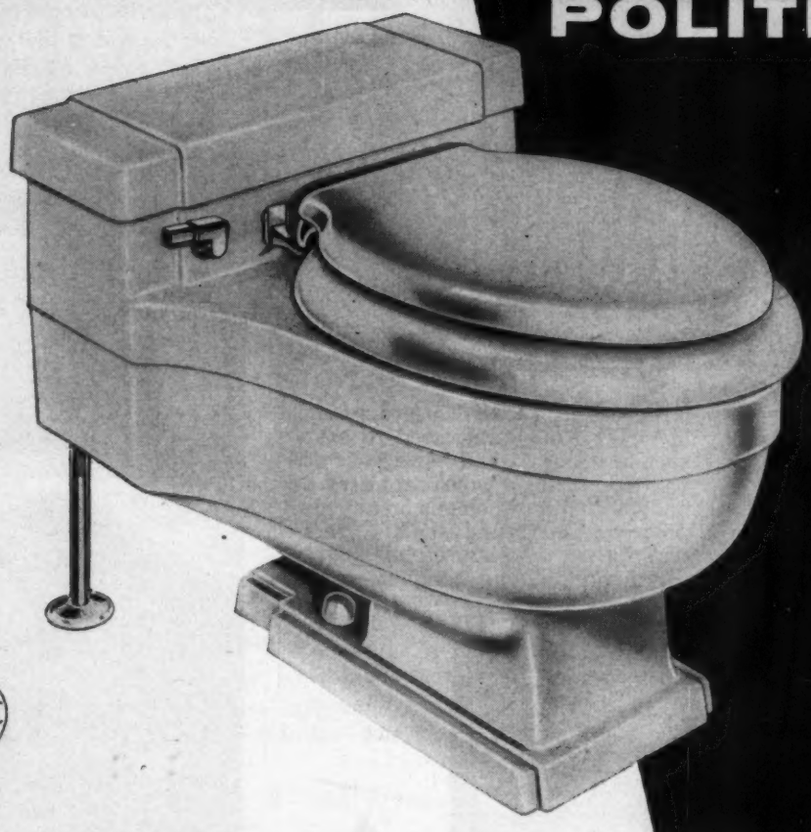
DATA SHEETS AND BULLETINS AVAILABLE UPON REQUEST.

Built-in Dependability

S. H. Couch Company, Inc.

NORTH QUINCY 71, MASSACHUSETTS

THE WATER CLOSET THAT FLUSHES POLITELY





We invite you and the people you serve to become more closely acquainted with the water closet that flushes politely. It's the famous CASE Non-Overflow One-Piece* water closet with the WHISPERING FLUSH. Because it's the finest available, you'll build your profits and your reputation every time you install a CASE One-Piece.

You get customer-winning features like non-overflow bowl; safe-guarding antisyphon ballcock; pressurized cleansing rim flush; large water area; healthful seat height; streamlined, up-to-the-minute design, time tested, with the whispering flush already known throughout the Building and Plumbing industry.

Remember, you can offer the CASE One-Piece water closet in 32 pastel colors and sparkling black and white... the widest vitreous china color selection on the market. Check your Case distributor in the "Yellow Pages" or write:

W. A. CASE & SON MFG. CO., 33 MAIN STREET
BUFFALO 3, NEW YORK

*PATENTED



1853-1955 Case® OUR 102nd YEAR

CASE QUALITY VITREOUS CHINA PLUMBING FIXTURES

THE RECORD REPORTS
PERIODICAL REPORTS

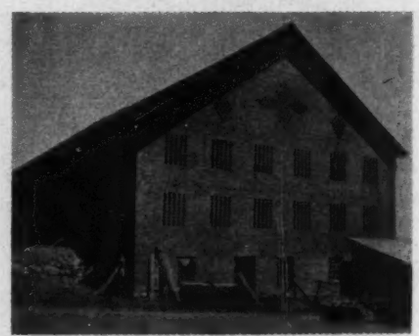
(Continued from page 362)

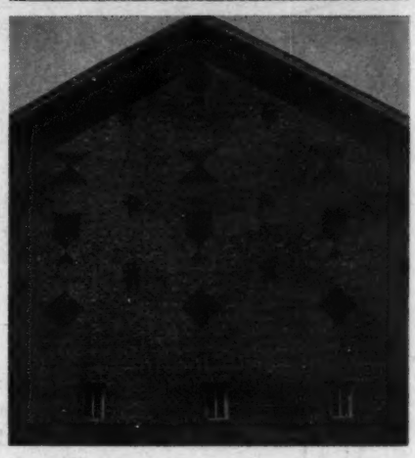
THE DUTCHMAN, December 1954, a magazine published by the Pennsylvania Dutch Folklore Center at Franklin and Marshall College, contains a piece by J. William Stair on "The Brick-End Barns of the Pennsylvania Dutch." The adjective "brick-end" derives from the fact that the ends and occasionally the sides of the barns are of brick, although the framework is of timber. The brick-end patterns, which serve for ventilation and lighting as well as for decoration, are formed by openings the size of the end of a single brick. Some of the barns have stood for more than a century.

The basic patterns used include the square or rectangle ("the bushel measure"); diamonds, either singly or in combination to form "the unfolding lily" pattern; triangles, sometimes combined to form the "sheaf of wheat" design; the X-shape; vertical slots; and the "wineglass" pattern.



Above: called by the author "The Masterpiece," this barn near McAllisterville contains diamond, cross and "unfolding lily" patterns. Below: "Simple Classic," near East Berlin, comprises "bushel measure" and "unfolding lily" designs





Above: the relatively rare "wineglass" pattern and the "sheaf of wheat" were used in this barn near Fayetteville. Below: interior of barn near Spring Grove showing oak timbers and the open brickwork



(Continued on page 366)

Wherever top quality in metal building materials is evident . . . look for the name MICHAELS

Here's a case in point: Michaels fabricated the bronze and stainless steel store fronts of the Sinton Hotel, Cincinnati. These inviting entrances are striking examples of the beautiful effects the carefully planned use of ferrous and nonferrous metal makes possible.

Michaels building materials of aluminum, stainless steel and bronze are used in many of the nation's largest structures. They are tops in quality, and fabricated to exact specifications. It will be to your advantage to have your architect or builder contact Michaels on any size project. You'll find them a thoroughly reliable source of supply for metal building components.







The Michaels Art Bronze Co., Inc., P.O. Box 668-R, Covington, Ky.

Experts in metal fabrications since 1870

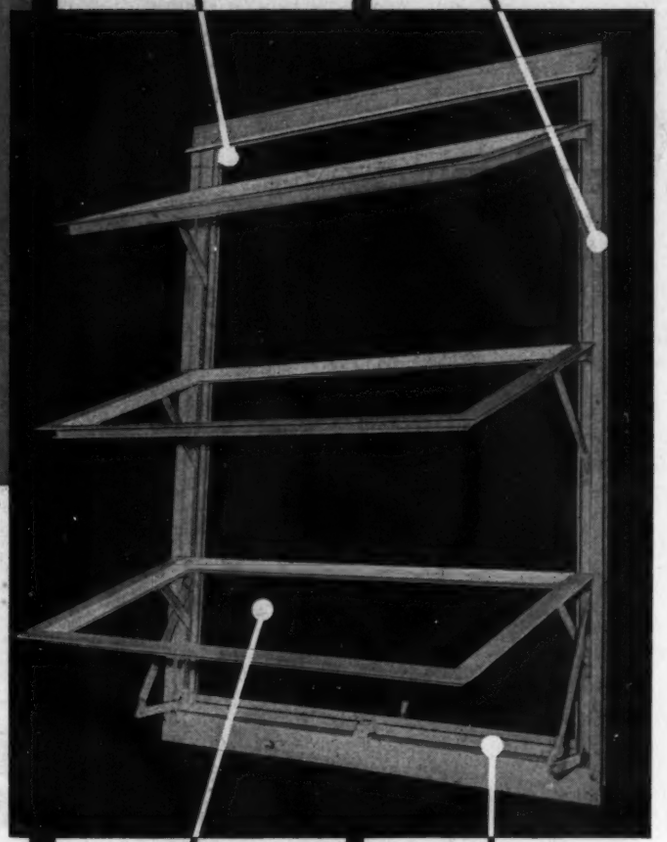
new weatherstripped WARE aluminum AWNING WINDOW

Combines famous Ware quality with important new features—at modest cost!

FEATURES THAT ADD PLUS VALUE!

Weatherstripped by premium vinyl locked in extruded channel unexposed to weather.

Wide overlap of weathering members. Minimum outside at jambs 5/16".



All ventilators have equal height and drop for easy cleaning.

Heavy reinforced sill.

Smooth, Sturdy CENTER SILL operator

Compound operator sealed in grease—completely enclosed—affords smooth, effortless operation.

Gear ratio prevents strain or stripping and increases power. Concealed in sill at factory. No on-the-job installation!

Entire operator and power bar nylon bushed—entirely self-lubricating—permanent.

Assures **balanced** power activating **both** window jambs simultaneously—prevents torque lag which causes ventilator distortion and puts unbalanced strain on linkage.

Torsion resistant tubular sill. ¾" solid extruded aluminum power bar.



Snap-on glazing bead available.

No special locking devices to cause distortion of ventilators and put undue strain on operator.

All windows chemically cleaned, etched and lacquered per FHA requirements.

Engineered for **simple, speedy installation.**

Designed for a great diversity of applications.

Write today for complete details
Address Dept. AR-9

Aluminum WARE *Windows*



Ware Laboratories, Inc., 3700 N.W. 25th St., Miami, Florida

THE RECORD REPORTS
PERIODICAL REPORTS

(Continued from page 364)

FORUM, February 1955. The Dutch magazine carried comments by architect J. Duboisson on his design for SHAPE Village at St. Germain-en-Laye, France (shown at right). The 300 units were erected on a sloping, heavily wooded site. The use of prefabricated units enabled the builders to meet the 10-month construction schedule.





Fairhurst® FOLDING WALLS + FAIRHURST CREATIVE ENGINEERING = MAXIMUM SPACE FLEXIBILITY



Fairhurst®

Fairhurst Unitfold Wall at Johns-Manville Laboratories, Manville, N. J. Shreve, Lamb, & Harmon, Architects.

for MULTIPLE ROOM USE . . .

- Separate Fairhurst Units join tightly to form a solid, rigid wall that permits simultaneous use of several space areas. To convert for larger groups, units move quickly and easily to storage, as indicated in inset drawing. Units then are completely out of the way.

for BUILT-IN QUIET . . .

- Sound leakage is reduced to the absolute minimum. Gaps or cracks, hardware, and similar fixed points are eliminated, to the extent that sound retardance of Fairhurst Folding Walls has approached that of a 10"-12" 3-coat plaster *solid masonry wall!*

for YOUR SPECIAL REQUIREMENTS . . .

- Each space problem differs; each requires careful analysis. For over 40 years, the unique adaptability of the Fairhurst approach has repeatedly found solutions to problems unsolvable by other means.

Let us prove these statements. Write for free booklet describing Fairhurst Unitfold & Unitslide.

® ®

John T. Fairhurst Co., Inc.

45 West 45th Street New York 36, N. Y.

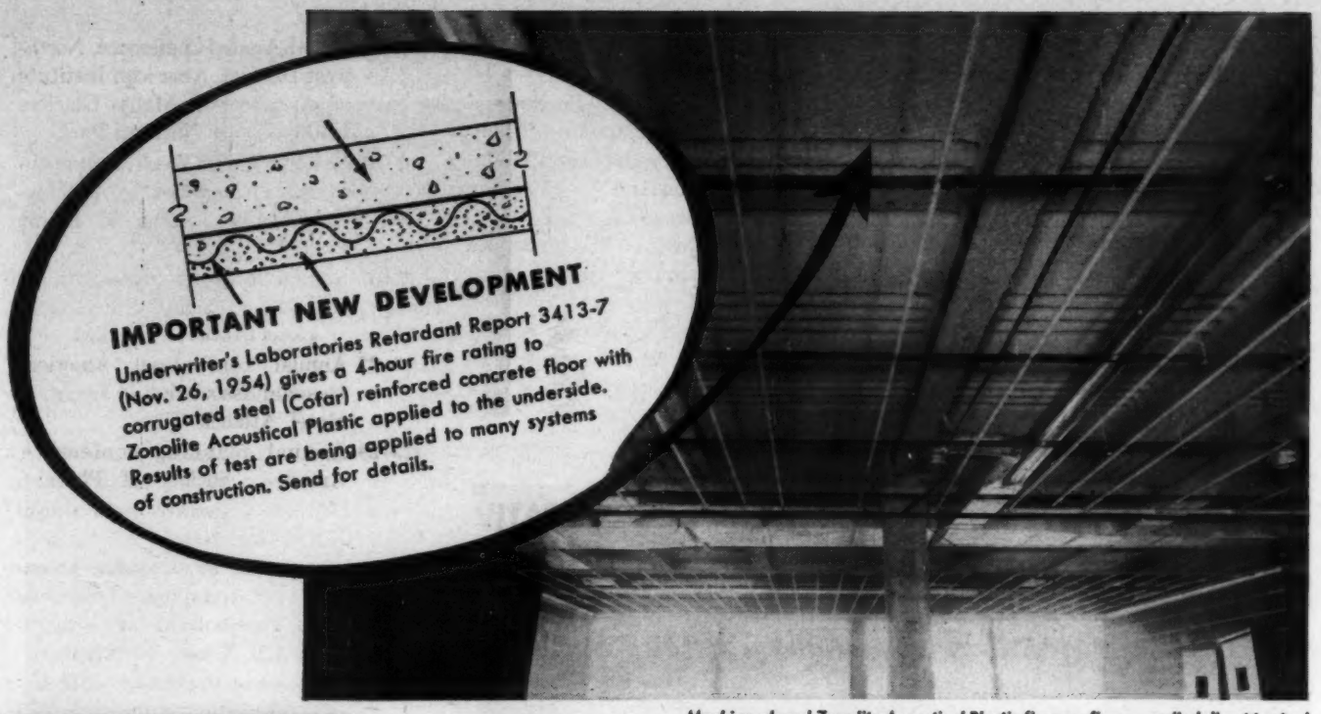
44 YEARS OF LEADERSHIP IN FOLDING WALLS

THE IRON AGE, June 1955, celebrates its centennial with an outsized issue subtitled "100 years of Metalworking." It follows up a history of its own progress with a look at the past, present and future of developments which are now or shortly will be affecting the manufacture and uses of metals. Its survey includes, among other things, a look at atomic energy not only as a source of power but as a possible source of new materials; a consideration of materials handling and the future of conveyor belts and automation; and an examination of possible applications of nonferrous metals such as aluminum or the lesser known magnesium, titanium, vanadium and germanium.

THE ARCHITECTURAL REVIEW, June 1955. Readers who remember the British journal's December 1950 issue on "Man-Made America" may be interested to learn that the editors, in a special number labeled in unmistakable red letters "Outrage," have now turned their critical sights on the English landscape. The introductory article, "Subtopia" (definition: "making an ideal of suburbia"), is willing to support the "suburban ethos" as long as it stays in its own place. "What is not to be borne," it says, "is that that ethos should drift like a gaseous pink marshmallow over the whole social scene, over the mind of man, over the land surface, over the philosophy, ideals and objectives of the human race; for that is what it is doing."

Included also in the issue: a photographic tour from Southampton to Carlisle and an article called "Agents," both illustrating phenomena which the *Review* regards as death to a bearable environment, and which range from badly planned airfields and arterial highways through wires and advertising to what are called "Things in Fields." The summing up, directed toward the layman, is composed of a manifesto and a checklist of malpractices.

(More news on page 368)



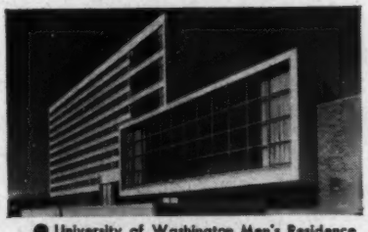
Machine-placed Zonolite Acoustical Plastic fireproofing—applied direct to steel floor, American Automobile Assn. office building, Kalamazoo, Michigan.



● Double Skyscraper represents *newest* in South American architecture. Centro Simon Bolivar, Caracas, Venezuela. *Architect:* Cipriana J. Dominguez



● Prize winner in recent school building contest. Double Oaks School, Charlotte, North Carolina. *Architect:* A. G. Odell, Jr. & Assoc.



● University of Washington Men's Residence Hall, Seattle, Washington. *Architect:* Young & Richardson, Carleton & Detlie



● A modern dwelling in the Chicago area. Residence, William E. Nuemann, DuPage County, Illinois. George Fred Keck and William Keck, *architects.*

On these acoustical jobs

ZONOLITE® ACOUSTICAL PLASTIC

was used

FOR SOUND CONDITIONING FIRE SAFETY AND BEAUTY

Where noise is a nuisance ZONOLITE is a big advantage for *three prime reasons.* (1) Zonolite Acoustical Plastic is highly sound absorbent—among the highest rating sound-deadening materials. (2) It is incombustible—has earned a 4-hour fire rating in various systems. (3) It possesses a highly pleasing appearance with many textures available in either light-buff or off-white.

And now, there's another important plus—Zonolite Acoustical Plastic is being *machine-applied* in buildings coast-to-coast, speeding jobs to completion sooner. You can avoid the tireless repetition of patterned ceilings and achieve sound conditioning plus 100% fire safety with Zonolite Acoustical Plastic. Send for detailed information, and specifications.

ZONOLITE BRAND VERMICULITE AGGREGATES

ZONOLITE COMPANY
135 S. LaSalle Street
Chicago 3, Illinois

Mail Coupon Today For FREE Booklet

Zonolite Company,
Dept. AR95, 135 S. LaSalle St.
Chicago 3, Illinois

Please send me free your new booklet "The Silent Treatment"—for Sound-Conditioning, Fire Protection, Beauty.

*Name*_____

*Firm*_____

*Address*_____

*City*_____ *Zone*____ *State*____

THE RECORD REPORTS

(Continued from page 366)

ON THE CALENDAR

September

6–16 Machine Tool Show, sponsored by National Machine Tool Builders' Association — International Amphitheater, Chicago

6–17 Production Engineering Show, an exhibit of automatic mechanisms and techniques for manufacturing and processing industries, sponsored by Clapp & Poliak — Navy Pier, Chicago

7–8 Premier showing, Producers' Council Inc., "Caravan of Quality Building Products and Modular Application" — Palmer House, Chicago

7–15 Plastic Design in Structural Steel; a "summer course" given in coöperation with the American Society for Engineering Education and the American Society of Civil Engineers — Lehigh University, Bethlehem, Pa.

9–11 Fourth Annual Conference, Northwest District, American Institute of Architects — Many Glaciers Hotel, Glacier National Park

10–18 National Home Week; annual observance sponsored by the National Association of Home Builders

12–16 Annual technical conference, Illuminating Engineering Society — Hotel Statler, Cleveland

19–22 Annual convention, American Hospital Association — Traymore Hotel, Atlantic City

25–29 Annual planning conference, American Society of Planning Officials — Sheraton Mount Royal Hotel, Montreal

26–30 Annual meeting, Atomic Industrial Forum, and First Trade Fair of the Atomic Industry — Sheraton-Park Hotel, Washington

27ff Congress of Correction; 85th annual convention of the American Correctional Association; until Oct. 1 — Hotel Fort Des Moines, Des Moines

27ff The 37th National Recreation Congress, sponsored by the National Recreation Association; until Oct. 1 — Denver

28–29 Industrial Electronics; a conference on automation and new control-system applications, co-sponsored by the American Institute of Electrical Engineers and the Professional Group on Industrial Electronics of the Institute of Radio Engineers — Detroit

28–29 Metal Curtain Walls; a research correlation conference sponsored by the Building Research Advisory Board — Washington, D. C.

29ff Fourth annual meeting, Standards Engineers Society; until Oct. 1 — Hotel Statler, Hartford, Conn.

29ff Annual conference, United States Civil Defense Council; until Oct. 1 — Hotel Statler, Boston, Mass.

October

Annual convention, California Council of Architects — Santa Barbara, Cal.

5–7 The 29th Design Conference sponsored by the Institute of Contemporary Art (Boston) — Arden House, Harriman, N. Y.

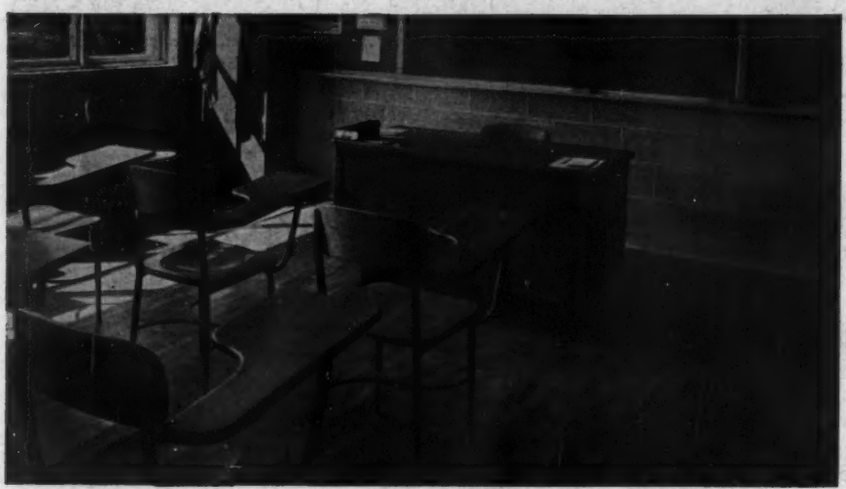
6–8 Sierra Nevada Regional Conference, American Institute of Architects — Biltmore Hotel, Santa Barbara, Cal.

6–8 Regional conference of the Gulf

(Continued on page 370)

SCHOOL FLOORS THAT OUTLAST THE BUILDING

for Gymnasiums, Classrooms, School Shops



ROBBINS IRONBOUND* CONTINUOUS STRIP* NORTHERN HARD MAPLE FLOORING

You're looking at a floor designed to "take it"! Uniformly resilient, tight grained and splinter resistant, it will still be smoothly beautiful for generations to come.

To achieve this happy combination of beauty and long run economy Robbins uses finest strips of Northern Maple, laid in mastic and interlocked with saw-tooth steel splines at the end of each strip. That's why a Robbins IRONBOUND CONTINUOUS STRIP floor stays tight and smooth so many times longer.

When you are planning a new school or a remodeling of an existing structure find out how Robbins can help you in solving flooring problems. Write for information. Facts also in Sweets Catalog — File 12 J / ST

Address inquiries to Robbins Flooring Company Reed City, Michigan.

MILLIONS WALK DAILY ON ROBBINS FLOORING

ROBBINS FLOORING COMPANY

WORLD'S LARGEST MAPLE FLOORING MANUFACTURER

Reed City, Michigan • Ishpeming, Michigan

* T.M. Reg. U.S. Pat. Off.

Alodized Aluminum Paneling | NO. 5

in a series on protective finishes for architectural aluminum.



NO MAINTENANCE OR CHANGE IN APPEARANCE SINCE 1950. Enduring protection and pleasing appearance are characteristic of Architectural Alodine®—the Alodized aluminum with the sunfast, decorative, glare-reducing finish. Architect: Dominique Birninger. Builder: George Synnestvedt. Owner: Andrew A. Klein, Bethayres, Pa.

WHAT ALODIZING IS . . . . . AND WHY YOU SHOULD SPECIFY IT.

"Alodizing" is a process using the ACP chemical "Alodine" that converts the aluminum surface to a continuous non-metallic layer. It adds years to the metal's resistance to corrosion, and provides a perfect bond for paint, lacquer, vitreous enamel and adhesives.

One type of "Alodine" protects aluminum yet preserves the original appearance of the metal; another produces a sun-fast stable green that ranges from a grey-green iridescence to the deep patina appearance of weathered copper; still another produces an iridescent brown.

All types reduce glare and reflectivity. All add to aluminum's usefulness and durability, particularly at the seaside, in industrial areas, and in contact with mortar.

IF IT'S ALUMINUM, BE SURE IT'S ALODIZED

A few of the many typical building products that should be Alodized: Roofing, Siding, Shingles, Gutters, Spouting, Jalousies, Screens, Hardware, Awnings, Blinds, Wall Tile, Sash and Door Frames, Curtain Wall Panels, Partitions, Heat and Vent Ducts, Trim, Cabinets, Refrigerating and Air Conditioning Equipment, Furniture, Light Fixtures.

For further information on Alodized aluminum, and other applications of the "Alodine" finish, write or call.

Since 1914, Pioneering Research and Development in Metal Protection

AMERICAN CHEMICAL PAINT CO.

Ambler, Pa. Niles, Cal. Detroit, Mich. Windsor, Ont.

CHEMICALS ACP PROCESSES

THE RECORD REPORTS

(Continued from page 368)

States District, American Institute of Architects — Roosevelt Hotel, New Orleans

6–8 Annual convention, Structural Engineers of California — Yosemite National Park, Cal.

12–15 Tenth Annual Conference, Central States District, American Institute of Architects — Hotel Jefferson, St. Louis

13–15 Annual convention, American Federation of Arts — Des Moines Art Center, Des Moines

13–15 New York Regional Conference, American Institute of Architects — Albany

13–15 Annual convention, New York State Association of Architects — Sheridan Ten Eyck Hotel, Albany

16–20 Annual meeting, National Association of Housing and Redevelopment Officials — Hotel Statler, Cleveland

19–21 Annual convention of the Architects Society of Ohio — Charter Hotel, Cleveland

24–26 Sixth National Conference on Standards, to be held under the joint sponsorship of the American Standards Association and the National Bureau of Standards — Sheraton-Park Hotel, Washington, D. C.

24–28 Convention of the American Society of Civil Engineers — Hotel Statler, New York City

26–28 The 23rd Annual Meeting, Porcelain Enamel Institute — The Greenbrier, White Sulphur Springs, W. Va.

31ff First National Electrical Exposition, sponsored by the National Electrical Contractors Association in connection with its 54th anniversary convention; until Nov. 2 — Waldorf-Astoria Hotel, New York City

November

2–4 Annual convention, Texas Society of Architects — Shamrock Hotel, Houston

2–5 World Symposium on Applied Solar Energy, sponsored by Association for Applied Solar Energy under the leadership of Stanford Research Institute — Westward Ho Hotel, Phoenix, Ariz.

5–10 Annual convention, Society of Industrial Realtors — Hotel Biltmore, New York City

6–10 Annual convention, National Association of Real Estate Boards — New York City

7–11 National Hotel Exposition — Kingsbridge Armory, New York City

8–11 Annual meeting, American Council of Independent Laboratories Inc. — Westward Ho Hotel, Phoenix, Ariz.

11–13 National Conference on Community Development, sponsored by the Adult Education Association of the United States of America — Jefferson Hotel, St. Louis

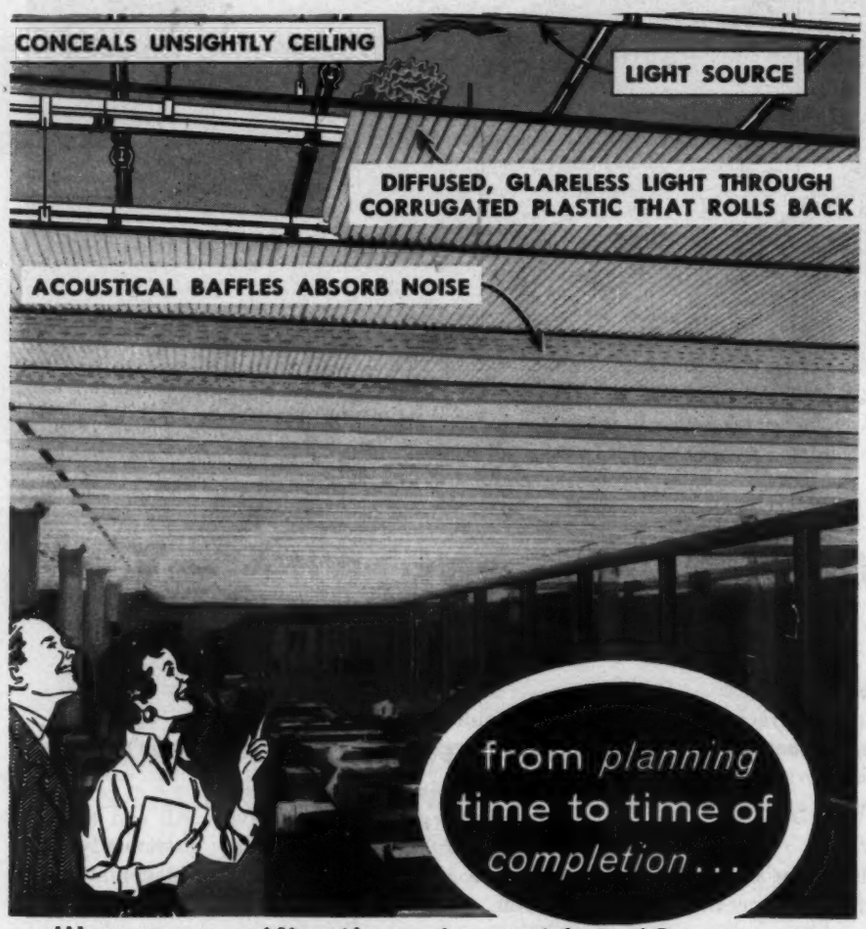
13–18 Diamond Jubilee annual meeting, American Society of Mechanical Engineers — Chicago

14–17 Second International Automation Exposition — Navy Pier, Chicago

14–18 Chicago Exposition of Power and Mechanical Engineering, in conjunction with 75th anniversary meeting, American Society of Mechanical Engineers — Coliseum, Chicago

23ff Built in Latin America; an exhibition of examples of 20th

(Continued on page 374)

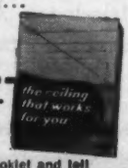


will *your* specifications be outdated?...see the *newest!* **See an Acusti-Luminus Ceiling near you!** *Lighting, sound control, air flow combined!*

The trend is to allover ceilings of glareless, shadowless light that also provide sound control and a ceiling-wide plenum for air conditioning and heating. ACUSTI-LUMINUS CEILINGS are easy to maintain. They're made from unbreakable, corrugated LUMI-PLASTIC and labeled by UL for installation under sprinkler systems. Three essential elements for modern interiors are combined at a cost that's lower than conventional illumination and sound control alone.

over 4500 installations!

See the functional beauty of an ACUSTI-LUMINUS CEILING for yourself... *send the coupon below for free illustrated booklet and location of an installation near you.*



Luminous Ceilings, Inc.
Dept. B-4 2500 W. North Ave.
Chicago 47, Ill.

Please send me your free illustrated booklet and tell me where I can see an ACUSTI-LUMINUS CEILING installation!

Name _____

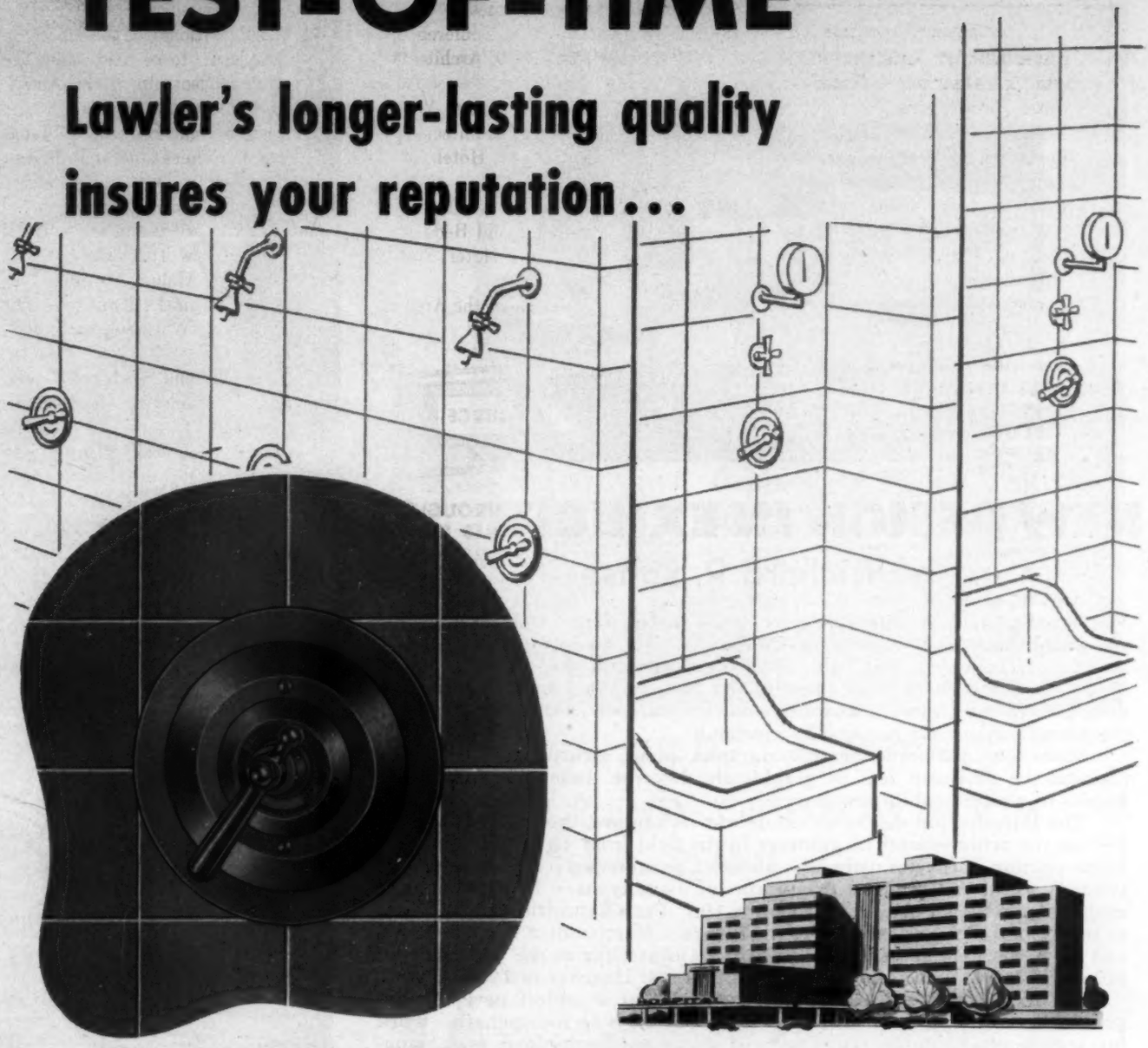
Firm name _____

Address _____

City & State _____

"TEST-OF-TIME"

Lawler's longer-lasting quality insures your reputation...



NOW — NEW STREAMLINED DIAL PLATE REPLACES FOUR, HIDES ALL

For clean modern lines and neater installations, the NEW LAWLER "BC" SHOWER MIXING VALVE leads the field. Valve, stops and checks with strainers now appear as one unit . . . *concealed behind the dial plate, yet readily accessible.* Exposed parts finished in polished chrome. Internal sliding parts are stainless steel.

Lawler's "Performance-Tested" design combines pioneering experience with engineering leadership. The use of specially chosen metals assure YOUR customers years of positive, accurate temperature control with lowest maintenance cost . . . the best insurance YOUR REPUTATION can have.

"Performance Tested" for Longer Life



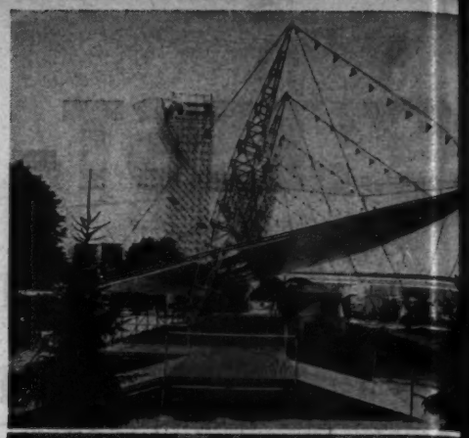
The Lawler Line **of Thermostatic Controls**

LAWLER AUTOMATIC CONTROLS, INC. 453 North MacQuesten Parkway, Mount Vernon, N. Y.

"A brilliant array of creative landmarks . . . an inspiring guidebook to modern design—one which every creative architect should own and enjoy."
Morris Ketchum, Jr. in *Progressive Architecture*

"An indispensable work for architects and designers involved with the problem of designing creative exhibitions." **Design News**









NEW DESIGN IN EXHIBITIONS

by Richard P. Lohse

Here is the first comprehensive book on modern exhibition design and architecture. *New Design in Exhibitions* gives an international cross-section of classics in this field. Superbly illustrated, this unique volume draws upon the finest work done in the past 20 years by architects and designers in the United States, England, France, Italy, Germany, Holland, the Scandinavian countries and Switzerland.

More than 600 excellent photographs, plans, structural details complement the pertinent text to graphically describe these outstanding examples of modern exhibition design.

The introduction describes exhibition techniques, themes and form as well as the achievements of pioneers in the field from 1851 to 1930. The major portion illustrates national, industrial, small manufacturing, scientific, cultural, social and political exhibitions of many types — 75 in number — ranging from the Finnish Pavilion at the 1937 Paris Exposition Universelles to the "Good Design" exhibition at Chicago's Merchandise Mart in 1950; and from the exhibit of Medieval Italian Goldsmiths at the Triennale di Milano in 1936, to the Haus Berlin exhibition at Hanover in 1951.

For its comprehensive, concrete treatment of a subject never before presented in book form, *New Design in Exhibitions* is an indispensable work for architects and designers as well as all creative exhibitors and manufacturers who wish effective, esthetic display of their products.

Richard P. Lohse is a Swiss architect who has specialized in exhibition design. He is editor-in-chief of *Bauen und Wohnen,* a Swiss architectural journal.

600 photographs
plans, structural details
and drawings

260 pages
9½ x 11". $13.50

10 DAYS FREE EXAMINATION

DODGE BOOKS, F. W. DODGE CORP.
119 West 40th Street, New York, N. Y.

Send me _____ copies of *New Design in Exhibitions* @ $13.50 each. Within 10 days I will remit the purchase price plus a few cents postage or return the book without obligation.

Name.....

Address.....

City.....Zone.....State.....

☐ *My check is enclosed. I pay no postage and have same return privilege.*

921

CONTENTS

Introduction
Situation Themes Form Exhibition techniques
Economic basis and development of exhibitions
The contribution of artistic pioneer achievements
1851–1930 (illustrated)

Illustrations—Exhibition of countries
Metal industry Office equipment industry
Small manufacturing Carriage building
Telephone industry Paints industry
Dyestuffs industry Glass industry Plastics indus
Textile industry Gardening

Exhibition of scientific pioneer achievements in architecture
Town-planning Dwelling houses Furniture The design of utilitarian articles
Building research Design Art Medieval culture Physics
Experimental research Photography

Exhibitions of social nature:
of Relief organizations
of Hospital architecture

Exhibitions of a political nature

Permanent exhibitions

Exhibitions of the building industry

Exhibition structures of private enterprise:
of Communes
of Relief organizations
of Hospital architecture



Maspeth, N. Y., building of Canada Dry Ginger Ale, Inc. *Architect:* Owner's Engineering Department and Andrew V. Bekay, N. Y. C. *General Contractor:* W. J. Barney Corp.; *Mechanical Engineer:* G. B. Tanis, both of New York.

LONGSPAN JOISTS PROVIDE PLENTY OF ELBOW ROOM IN NEW CANADA DRY BOTTLING PLANT

The new bottling plant of Canada Dry Ginger Ale, Inc., at Maspeth, Queens, New York City, is one of 260 such production units throughout the world. The Maspeth building houses a complete production area, extensive warehouse facilities, garage, water-treatment and boiler rooms and offices in a 201,000 sq ft area.

Over a framework of Bethlehem structural steel is a roof structure of Bethlehem Longspan Steel Joists, varying from 40 ft to 50 ft in length. Bethlehem Longspans were chosen because they allow plenty of column-free space below, besides providing non-warping, fire-resistant construction.



To the Canada Dry operation, column-free floor space is invaluable. Long conveyor-system bottle-washing and filling operations require uninterrupted space in the production area of the building. Stockpiles of soft-drink cases, 56 to the pallet, handled by fork-lift trucks, fill the warehouse. And a roomy garage houses the company's large fleet of delivery trucks serving the Manhattan and Long Island areas of the city.

In addition to their other advantages, Bethlehem Longspans were delivered to the job site ready for placing, with no delays to the production schedule. They required only field welding to secure them firmly, and to provide, with the structural steel framing, a rigid, permanent construction.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM LONGSPAN STEEL JOISTS

BETHLEHEM STEEL

Only window **today** that's designed and engineered for

tomorrow's modern living!

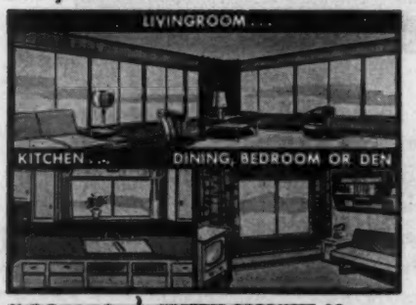


only window today with all these features—

- New V-shape twin interlock for perfect weather seal
- needle roller-bearings on stainless steel pins for permanent feather-glide
- streamlined "invisible" handle with automatic tamper-proof bolt-lock
- double-glazed—no storm windows needed
- built-in rust-proof aluminum screen
- Lifetime wear due to heavy extrusions, double I-beam sill, integral jamb flanges and fin.

Glidemaster

. . . your window for tomorrow's



Mail Coupon for FREE Brochure! } WHIZZER PRODUCTS CO. 350 S. Sanford, Pontiac, Michigan

Send BROCHURE on GLIDEMASTER Windows.

(NAME)

(NUMBER - STREET)

(CITY - ZONE - STATE)

THE RECORD REPORTS

(Continued from page 370)

century Latin American architecture selected by Henry-Russell Hitchcock and photographed by Rosalie Thorne McKenna; until Feb. 20 — Museum of Modern Art, 11 W. 53rd St., New York City

28ff Ninth Air Conditioning and Refrigeration Exposition, sponsored by the Air Conditioning and Refrigeration Institute; until Dec. 1 — Auditorium, Atlantic City

28ff White House Conference on Education; until Dec. 1 — Washington, D. C.

30ff The 42nd annual convention, National Warm Air Heating and Air Conditioning Association; until Dec. 1 — Hotel Statler, New York City

OFFICE NOTES

Offices Opened

• Duryea Cameron, A.I.A., announces the establishment of his offices at 1327 N. Front St., Harrisburg, Pa.

• Robert W. Conner, Architect, has opened an office at 244 S. Main St., High Point, N. C.

• Joseph L. Donofro, A.I.A., has announced that he has opened offices at 208 N. Oates St., Dothan, Ala.

• William P. Greening, A.I.A., recently opened offices at 356 S. Beach St., Daytona, Beach, Fla.

• James Edward Lynskey has announced the opening of an office at 1553-A Sunset Dr., S. Miami, Fla., for the practice of architecture.

Firm Changes

• Baskervill & Son, Hankins & Anderson, Architects and Consulting Engineers, is the new partnership formed by a merger of the firms Baskervill & Son, Architects, and Hankins & Anderson, Consulting Engineers. Members of the firm, which has offices at 2313 W. Cary St., Richmond, Va., include Alexander L. Anderson, H. Coleman Baskervill, James W. Breed, F. Milton Garey, Richard P. Hankins, C. Roderick B. Hobbs, Henry T. Huband, Carl A. Lindgren Jr., and John K. Peebles Jr.

• The firms Leinweber, Yamasaki & Hellmuth, of Detroit, and Hellmuth,

(Continued on page 378)





recognize this renderer's technique?

The pencil technique of a top flight renderer is as distinctively and individually his as his signature. Yet the work of so many of these fine artists has one thing in common — it is done with Mars-Lumograph imported drawing pencils and leads. Renderers find Mars the perfect pencil for every step of the job.
Whether you are rendering, detailing, or making working drawings, get the imported Mars-Lumograph or the Mars-Technico push-button lead holder and drawing leads. You'll be glad you did.



Vincent Furno, A.I.A. who executed the above rendering.

The 2886 Mars-Lumograph drawing pencil, 19 degrees, EXEXB to 9H—$1.50 per dozen —less in quantity. The 1001 Mars-Technico push-button lead holder — $1.50 each — less in quantity. 1904 Mars-Lumograph imported leads, 18 degrees, EXB to 9H—$1.20 per dozen—less in quantity.

J.S. STAEDTLER, INC.
HACKENSACK, NEW JERSEY

at all good engineering and drawing material suppliers

Plumbing Fixtures by RICHMOND



NEW YORK COLISEUM

ARCHITECT—Leon and Lionel Levy
MECHANICAL ENGINEER—Guy B. Panero
STRUCTURAL ENGINEER—Dr. Jacob Feld
OWNER—Triborough Bridge & Tunnel Authority
BUILDER—Walsh-Fuller-Slattery
PLUMBING CONTRACTOR—Astrove Plumbing Co
WHOLESALER—Smolka Co., Inc.

RICHMOND FIXTURES FOR NEW YORK COLISEUM



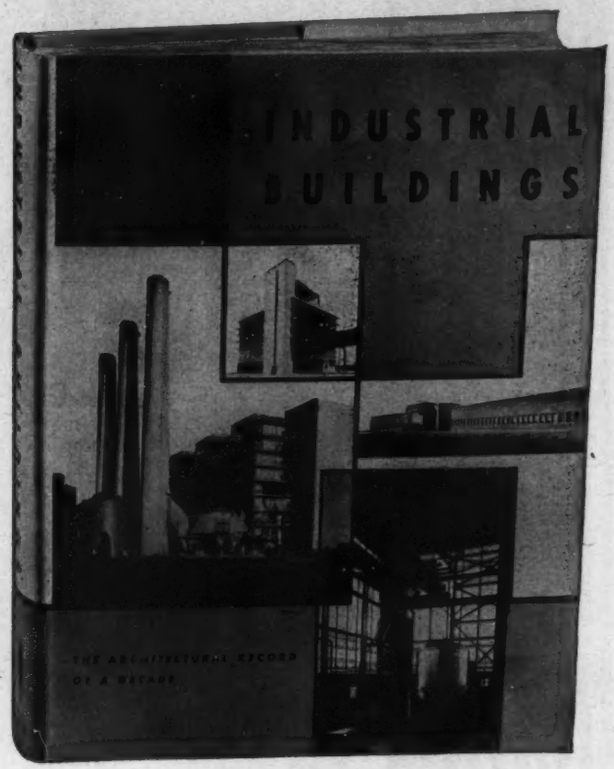




RICHMOND
RADIATOR COMPANY
16 Pearl Street, Metuchen, N. J.
AFFILIATE OF REYNOLDS METALS COMPANY

Ten Years in the Making—the Book that Gives You the Expert Aid and Advice of Scores of Architects, Engineers, and Technical Specialists!

INDUSTRIAL BUILDINGS



1,188 Illustrations!
546 Pages! **116 Projects!**

A Truly GREAT Reference Volume

ALL of the famed Building Types Studies on *Industrial Buildings* that appeared in ARCHITECTURAL RECORD over a full ten year period—including, of course, the active war years—are reprinted in this amazingly comprehensive reference volume.

It's ALL here! Everything you should know about industrial building down to fine details, featuring—

A wide range of factories, plants, shops, laboratories . . . basic factors influencing design . . . heating and ventilating . . . costs . . . equipment . . . materials . . . lighting . . . plumbing . . . PLUS detailed case-history studies with complete technical data on all other factors important in industrial building.

Text and Picture Story of America's Recent Industrial Development

Here is a volume of almost encyclopedic proportions crammed with down-to-earth facts and provocative ideas, focussed to show you advanced designs and building techniques—some daring, some amazingly economical—all compactly arranged, fully diagramed and illustrated. Here you'll find significant studies of many of America's newest and most efficient industrial buildings. Buildings for research . . . buildings for manufacturing . . . buildings for storing. Included are such outstanding projects as the Johns-Manville Research Center in New Jersey; General Electric's "Electronics Park"; the Federal Telecommunication Laboratory; Firestone's Research Laboratory; The Bell Aircraft factory; Willow Run; the noteworthy Bluebonnet Plant of the Corn Products Refining Company in Texas; and scores of others.

Also treated are such specialized problems as "Factory Toilets and Locker Rooms," "Rest Rooms and Cafeterias," "Thermal Expansion," "Unit Heaters for Industrial Plants," "Lighting of Industrial Plants," "Color Systems for Factories," "Laboratory Service Piping," "Economical Steel Framing Details," "Docking Facilities for Motor Transports," etc.

Order Your Copy . . . Today!

Architects, engineers, builders, contractors and industrial organizations are purchasing this great new work in ever-increasing numbers. Assure yourself of a copy before the limited printing becomes exhausted by filling in and mailing the coupon below.

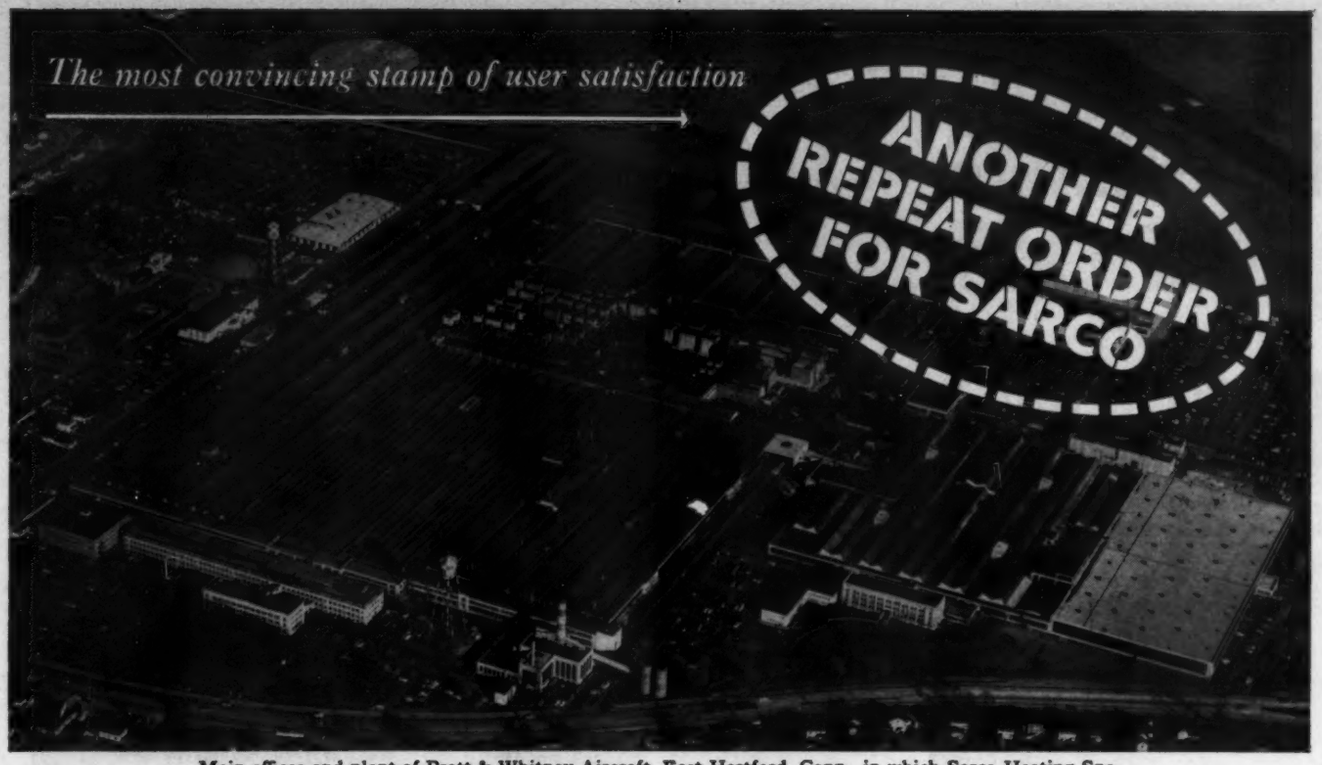
DODGE BOOKS, F. W. Dodge Corp. 921
119 West 40th St., New York 18, N. Y.

Send me ..... copies of *Industrial Buildings* @ $9.00 each. Within 10 days I shall remit payment plus a few cents postage or return the book without obligation.

Name .....

Address .....

City ..... Zone ..... State .....



Main offices and plant of Pratt & Whitney Aircraft, East Hartford, Conn., in which Sarco Heating Specialties are installed. These Sarco products are used by all divisions of United Aircraft Corporation.

35 repeat orders from United Aircraft

for Sarco Heating Specialties!

First installation in 1933. Thirty-five installations since. That's the 22-year record of Sarco Heating Specialties in plants and office buildings of all United Aircraft Divisions.

35 *large* repeat orders... won by Sarco proved dependability!

Several thousand Sarco steam traps and other Sarco Heating Specialties are on the job at:

Pratt & Whitney Aircraft Div., East Hartford, North Haven and Southington, Conn., *Hamilton Standard Division*, Windsor Locks, Conn., *Sikorsky Aircraft Division*, Bridgeport and Stratford, Conn.

For further information on Sarco heating specialties, Sarcotherm weather-compensated control systems for steam and hot water heating, and Sarcofin finned-tube and baseboard radiation, write Sarco Company, Inc., Empire State Building, New York 1, N.Y.

SARCOFIN Radiation

...another Sarco product

APPROVED RATINGS—by Institute of Boiler and Radiator Manufacturers for finned-tube and baseboard radiation.

1-YEAR GUARANTEE against defects in materials and workmanship.

COOPERATION—careful selection of radiation by experienced Sarco and Sarcotherm heating engineers.

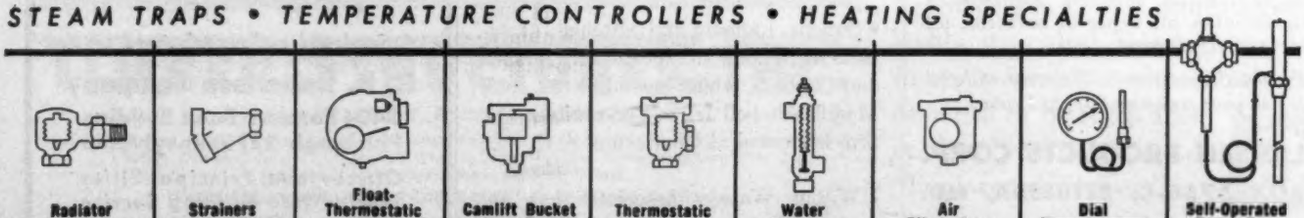
Write for Bulletins

2131-B

SARCO

Sarco quality assures satisfaction

STEAM TRAPS • TEMPERATURE CONTROLLERS • HEATING SPECIALTIES



Radiator Valves • Traps | Strainers | Float-Thermostatic Traps | Camlift Bucket Steam Traps | Thermostatic Traps | Water Blenders | Air Eliminators | Dial Thermometers | Self-Operated Temp. Reg.

ONE COAT PLASTERING MADE EASY WITH PLASTER·WELD

. . . the Remarkable, Versatile JOB-PROVED BONDING AGENT



Midway Gardens Apts., Chicago. One of hundreds of successful Plaster-Weld installations. In this case, Plaster-Weld was used to *permanently* bond lime-putty coat *directly* to all concrete ceilings and columns. Archts.: Holabaird, Root & Burgee & Associates; Genl. Contr.: S. N. Nielsen Co.; Plstg. Contr.: McNulty Brothers Company. Many other examples of Plaster-Weld applications gladly sent on request.

Plaster-Weld is the scientific resinous water-emulsion bonding agent which gives you a guaranteed method of *permanently bonding* Gypsum, Lime-Putty, Acoustical Plaster and Cements to themselves . . . or *directly* to any structurally sound surface including—

Concrete ceilings, beams, columns . . . Plastered walls and ceilings . . . Stippled or textured walls . . . Painted or unpainted surfaces . . . Brick . . . Stone . . . Wood . . . Glass . . . Block . . . Metal . . . Slabs . . . Ceramic Tile

A PLASTER·WELD BOND *NEVER LETS GO!*

Plaster-Weld is applied with brush, roller, spray gun *directly* to most surfaces (old or new) without need for costly, time-consuming surface preparation. You cover with new material, as soon as touch dry (usually an hour) or several days later.

The bond you make is permanent, ageless . . . the bond itself is much stronger than the material being bonded. Equal bonding permanence all climates, all types of surfaces, all sorts of conditions.

For details, see Sweet's File, write us direct, or ask your Building Supply Dealer.

LARSEN PRODUCTS CORP.
BOX 5756-C, BETHESDA, MD.

THE RECORD REPORTS

(Continued from page 374)

Yamasaki & Leinweber, of St. Louis, have been dissolved. Successor to the Detroit firm is Yamasaki, Leinweber & Associates, Architects & Engineers, 112 Madison Ave., Detroit. Hellmuth, Obata & Kassabaum, Architects, have succeeded the St. Louis firm; offices are at 1313 International Bldg., St. Louis 1, Mo.

• McClure & Kerr, Architects, have announced that the partnership has been dissolved. Francis K. Kerr will continue to practice at 621 W. Lake St., Minneapolis, Minn.

• The firm of Mortensson & Abbott has been dissolved, and N. Holger Mortensson will continue the practice at W. 2870 First National Bank Bldg., St. Paul 1, Minn. Merle V. Abbott has opened offices at 240 Foshay Tower, Minneapolis 2, Minn.

• Uel C. Ramey and Harold W. Himes have announced that the firm of Ramey and Himes, Architects, has been dissolved. Mr. Himes will join the teaching staff of the Department of Architecture at Iowa State College, and Mr. Ramey will continue the firm's practice as Uel C. Ramey & Associates, Architects, 830 N. Main, Wichita, Kan.

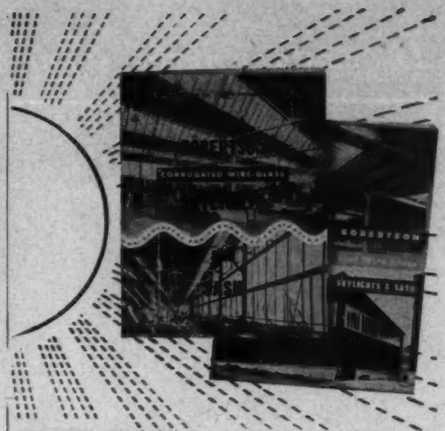
• Walter Sanders, A.I.A., has been retained as a consultant on architectural design by Albert Kahn Associated Architects & Engineers, of 345 New Center Bldg., Detroit 2, Mich. Mr. Sanders is currently the Chairman of the Department of Architecture at the University of Michigan.

• Shreve, Lamb and Harmon Associates announce that they have advanced to executive status five members of the firm: architects Henry M. Barone, Harvey P. Clarkson, George M. L. Gill, William H. Leyh and Robert E. Nielsen. Offices are at 11 E. 44th St., New York 17, N. Y.

• Simons, Lapham and Mitchell, Architects, is the new title of the firm Simons and Lapham, which has admitted John Magill Mitchell Jr., to partnership. The firm is located at Charleston, S. C.

• Wilbur Watson Associates has announced that members of the partnership

(Continued on page 382)



Write

for these free booklets to learn more about the science of daylight engineering

The booklets shown here concerning corrugated and flat wire-glass skylights and sash cover a subject of increasing importance in modern industrial construction—*daylight engineering*—the calculated use of free natural light. You'll find a wealth of photographs showing successfully daylighted buildings, plus structural details and specifications for application to all types of roof and wall construction. You'll see how H. H. Robertson Company establishes a "planned daylighting curve" to accurately predict the foot-candle intensity to be gained from a given skylight or sash recommendation. Write for this free literature. It should be a part of every architectural and engineering file.

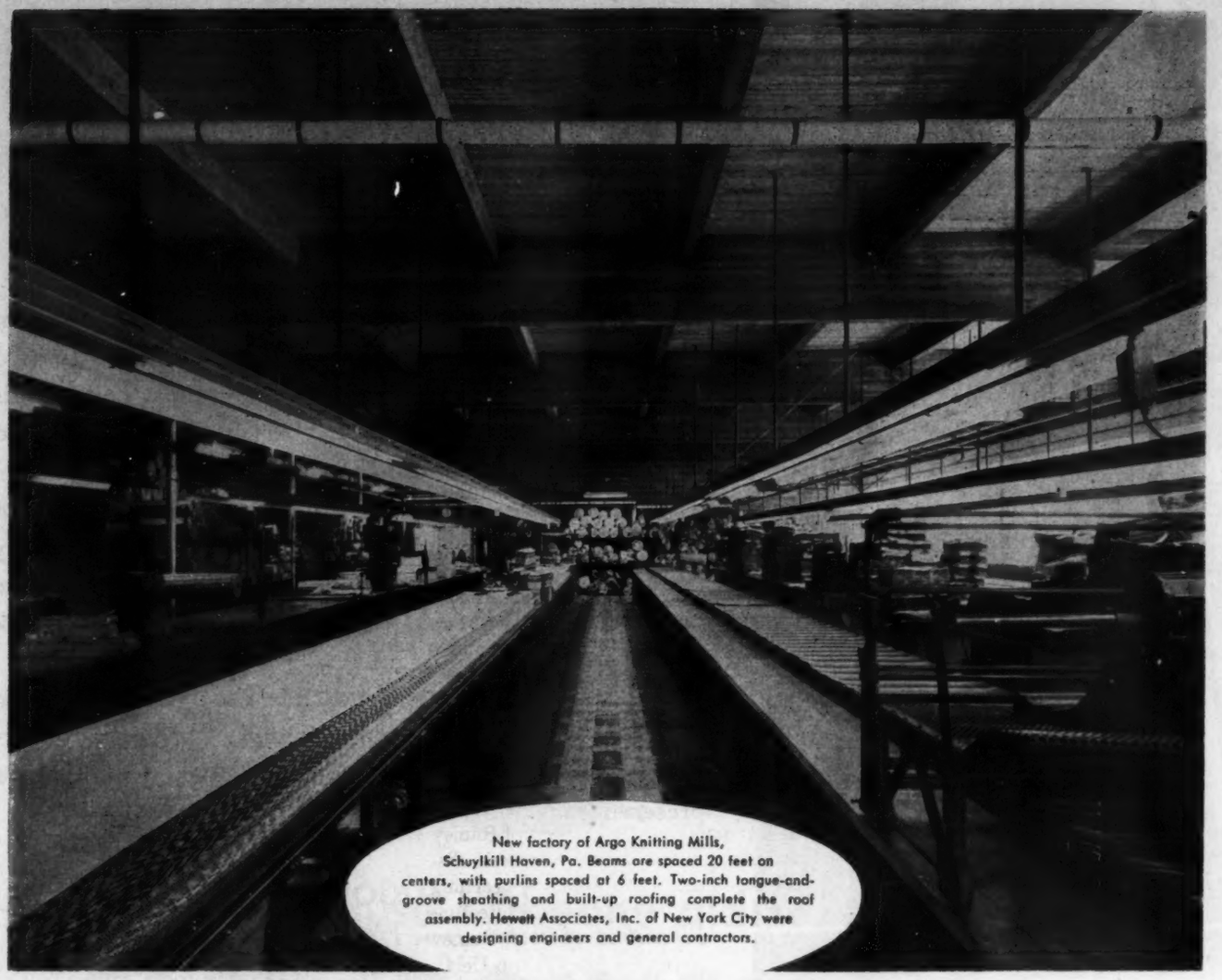


Robertson Skylights & Sash

developed and manufactured by

H. H. Robertson Company
2404 Farmers Bank Building
Pittsburgh 22, Pennsylvania

Offices in All Principal Cities
World-Wide Building Service



New factory of Argo Knitting Mills, Schuylkill Haven, Pa. Beams are spaced 20 feet on centers, with purlins spaced at 6 feet. Two-inch tongue-and-groove sheathing and built-up roofing complete the roof assembly. Hewett Associates, Inc. of New York City were designing engineers and general contractors.

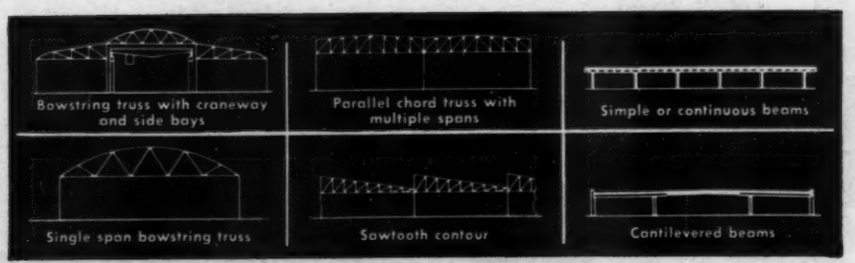
Design IN TIMBER...

for permanent low cost industrial buildings

This modern factory building has bays 50 feet wide without a post to interfere with production processes and equipment. It will last for generations with negligible maintenance, yet it cost materially less than average for permanent structures of this kind. And its ability to resist destruction by fire is greater than buildings framed by other commonly used materials.

All this was accomplished by engineered timber beams of Timber Structures, Inc. Timber trusses give equally good results with even wider spans, up to 250 feet or more.

For details of this dimensionally stable structural framing see our insert in Sweet's Architectural File, or write to us for a free copy of the booklet... "Engineered Timbers".



TIMBER STRUCTURES, INC.

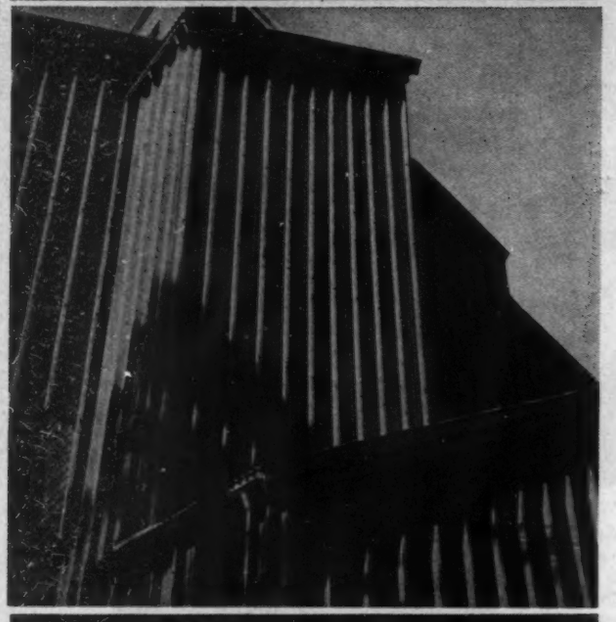
P. O. BOX 3782-C, PORTLAND 8, OREGON

Offices in Ramsey, N. J.; Garden City, N. Y.; Chicago; Ferndale, Mich.; Kansas City; St. Louis; Minneapolis; Boston; Columbus; Decatur; Des Moines; Wichita; Dallas; Houston; Birmingham; Charlotte; Memphis; West Hartford; Seattle; Spokane; Denver.

TIMBER STRUCTURES, INC. OF CALIFORNIA • Richmond, California

Local Representatives throughout the United States and Canada







FINNISH ARCHITECTURE AND ALVAR AALTO

by Eduard and Claudia Neuenschwander

Here is an important graphic survey of the work of Finland's most outstanding architect. Alvar Aalto is held in highest esteem by a country which traditionally holds the creative genius and the intellectual in higher regard than the political leader or the commercial success.

From 1950 to 1952 Aalto had the unique experience of seeing his major projects (over 30 of them) immediately progress from plans to construction. Despite this prolific output, plans, renderings and photographs of Aalto's work are extremely rare.

This unusual book was possible only because Eduard Neuenschwander, who worked with Aalto during this extremely productive period, succeeded in acquiring and preserving much original material from destruction.

TWO MAJOR SECTIONS

Finnish Architecture from 1764 to 1950 — 62 pages

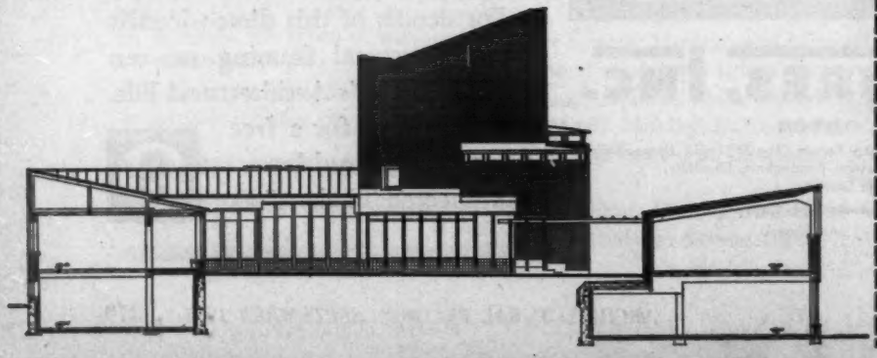
Houses, Churches, Stables, Commercial Buildings, Villages, Public Buildings. Includes many design details.

The Works of Alvar Aalto, 1950, 1951 — 130 pages

Power Stations, Manufacturing Buildings, Warehouses, Settlement Houses, Restaurants, Public Buildings, Community Centers, Houses, Lighting Equipment Designs, and the complete Finnish Technical High School Plant.

Superbly illustrated with over 300 interior and exterior photographs, plans, renderings and detailed layouts. 192 pages, 7 x 10¾", $9.00.

10 DAYS FREE EXAMINATION



Dodge Books, F. W. Dodge Corp. 921

119 WEST 40th STREET, N. Y. C. 18, N. Y.

Send me _____ copies of *Finnish Architecture and Alvar Aalto* at $9.00 each. Within 10 days I shall remit the purchase price and a few cents postage or return the book without obligation.

Name_____

Address_____

City_____ Zone_____ State_____

☐ My check is enclosed

I pay no postage and have same return privilege



. . . because someone did NOT specify

CAST IRON SOIL PIPE

You know how strict the laws governing sanitary facilities in public places are. If they break down — the building's closed until they're repaired.

When it comes to the plumbing drainage system — *you can avoid such shutdowns, right in the soft-pencil stage.* Simply specify **Cast Iron Soil Pipe** for waste and vent stacks and sewage lines.

Here's why: With cast iron, the whole plumbing drainage sytem has the same life expectancy as the structure — Government depreciation tables give cast iron top rating (i.e. good for the life of the building). For cast iron makes a *really rugged* line — it's physically strong, and most important, its joints are as good as the pipe itself. They're packed tight with oakum and sealed for life with molten lead.

So make sure lifetime protection is *built into* your buildings. *Write in* the specification that keeps out failure — **Cast Iron Soil Pipe.**

PERMANENT CAST IRON SOIL PIPE has *all* these advantages:

- **Rugged metallic strength**
- **Zero moisture absorption**
- **Permanent tightness of joints, with flexibility**
- **The only pipe accepted in all codes for use from street to roof**

THE MARK OF QUALITY AND PERMANENCE

CAST IRON SOIL PIPE INSTITUTE
Dept. AR-9, 1627 K Street, N. W., Washington 6, D. C.

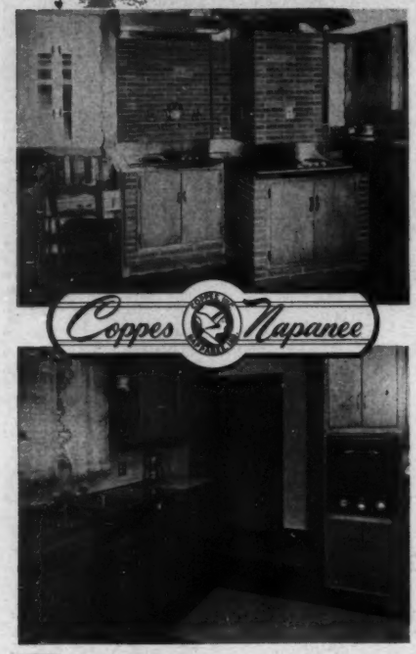
Send me _____ copies of your new 12-page booklet "Best in the Long Run" that shows, with actual photographs and authenticated captions, what can happen to lines that aren't Cast Iron.

Name_____

Address_____

City_____ Zone____ State____





They never want any other kitchen





or any other home!

Let America's finest Quality Kitchen sell for you!

Only Coppes Napanee gives your customers all four: Complete Custom Styling . . . Finest Hardwood Construction . . . Matchless Furniture Craftsmanship . . . and the Most Beautiful Natural Stains or Enamel Finishes.

rite for details to Dept. AP

COPPES, inc.
NAPPANEE, IND.

THE RECORD REPORTS

(Continued from page 378)

include T. E. Terry, engineer, and S. Y. Symns, engineers, as senior partners, and C. A. Carlson, engineer, and W. D. Englehorn, Architect, as junior partners. Mauno Backlond has withdrawn from the firm, which has offices at 2930 Prospect Ave., Cleveland 15, Ohio.

• John Winthrop Wolcott, A.I.A., will continue the practice of the firm of Finney, Wolcott and Associates, which has been dissolved. Offices are at 36 E. 25th St., Baltimore 18, Md.

New Addresses

Allison and Rible Architects, 3670 Wilshire Blvd. at Hobart, Los Angeles 5, Cal.

Armet & Davis, A.I.A., 2440 W. Third St., Los Angeles 57, Cal.

Myles E. Belongia, Architect, 239 W. Center St., Milwaukee 12, Wis.

Harold A. Casey & Associates, Inc., 817 St. Louis St., Springfield, Mo.

S. Elmer Chambers, Architect, 633 S. Warren St., Syracuse 2, N. Y.

P. L. Davidson, Consulting Engineer, 1500 Walnut St., Philadelphia, Pa.

Harry M. Denyes Jr., A.I.A., 950 N. Hunter Blvd., Birmingham, Mich.

Hammel & Green, Architects, 1932½ University Ave., St. Paul 4, Minn.

Hubert B. Hobson, A.I.A., George I. Mizata, Associate, 44–606 Kaneohe Bay Dr., Kaneohe, Oahu, T. H.

William Arild Johnson & Associates, Architects and Engineers, 3506 Broadway, Everett, Wash.

Lockwood Greene Engineers, Inc., Architects-Engineers (Boston office), 316 Stuart St., Boston 16, Mass.

Harold L. McClellan, Architect, 256 N. Park Ave., Warren, Ohio.

Meyer & Evers, Architects, 268 Market St., San Francisco 11, Cal.

Donald H. Miller, Architect, 131 St. Mary's Dr., Oxnard, Cal.

William H. Odell, A.I.A., 1215 Dime Bldg., Detroit 26, Mich.

Sargent, Webster, Crenshaw & Folley, Architects, Iroquois Ave. and Washington St., Watertown, N. Y.

Howard E. Schroeder, Architect, 1750 W. Silver Spring Dr., Glendale, Wis.

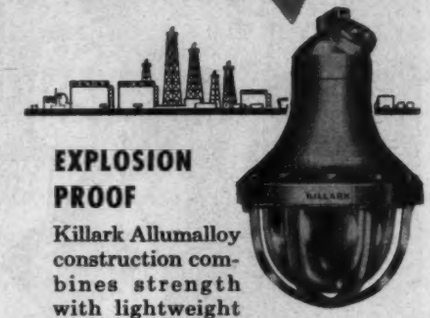
CORRECTION

The RECORD inadvertantly omitted credit to Black Star for the photograph appearing in the upper right corner of p. 170, July 1955.

where SAFETY is a factor make

KILLARK

your fixture



EXPLOSION PROOF

Killark Allumalloy construction combines strength with lightweight compactness. Fixture has safety factor of 4 to resist internal explosions. Easy to relamp. In 60W to 500W; ceiling, bracket and pendant styles.



VAPOR TIGHT

Absolutely vapor and weather tight. Designed to meet any lighting need in moisture-laden areas. Reflectors in standard dome, shallow bowl or angle style.



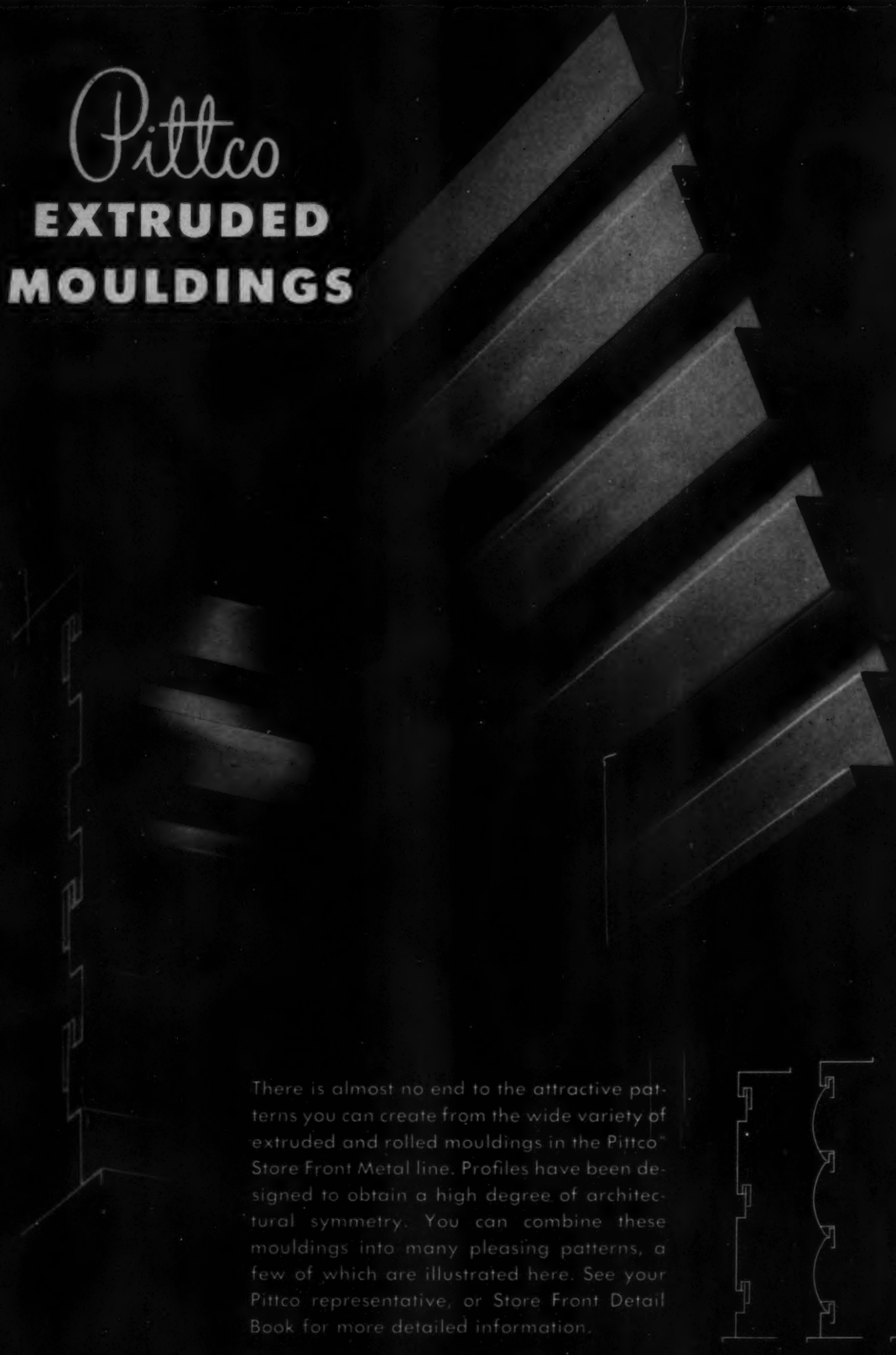
DUST TIGHT

Graceful "ledge-free" design can't accumulate dust. Close-fit fixture parts exclude any dust particles. Complete with lamp receptacle, clear globe. Ceiling, bracket and pendant styles.

WRITE FOR ILLUSTRATED LITERATURE

Killark
ELECTRIC MANUFACTURING CO.
Vandeventer & Easton, St. Louis 13, Mo.

Pittco
EXTRUDED MOULDINGS



There is almost no end to the attractive patterns you can create from the wide variety of extruded and rolled mouldings in the Pittco® Store Front Metal line. Profiles have been designed to obtain a high degree of architectural symmetry. You can combine these mouldings into many pleasing patterns, a few of which are illustrated here. See your Pittco representative, or Store Front Detail Book for more detailed information.

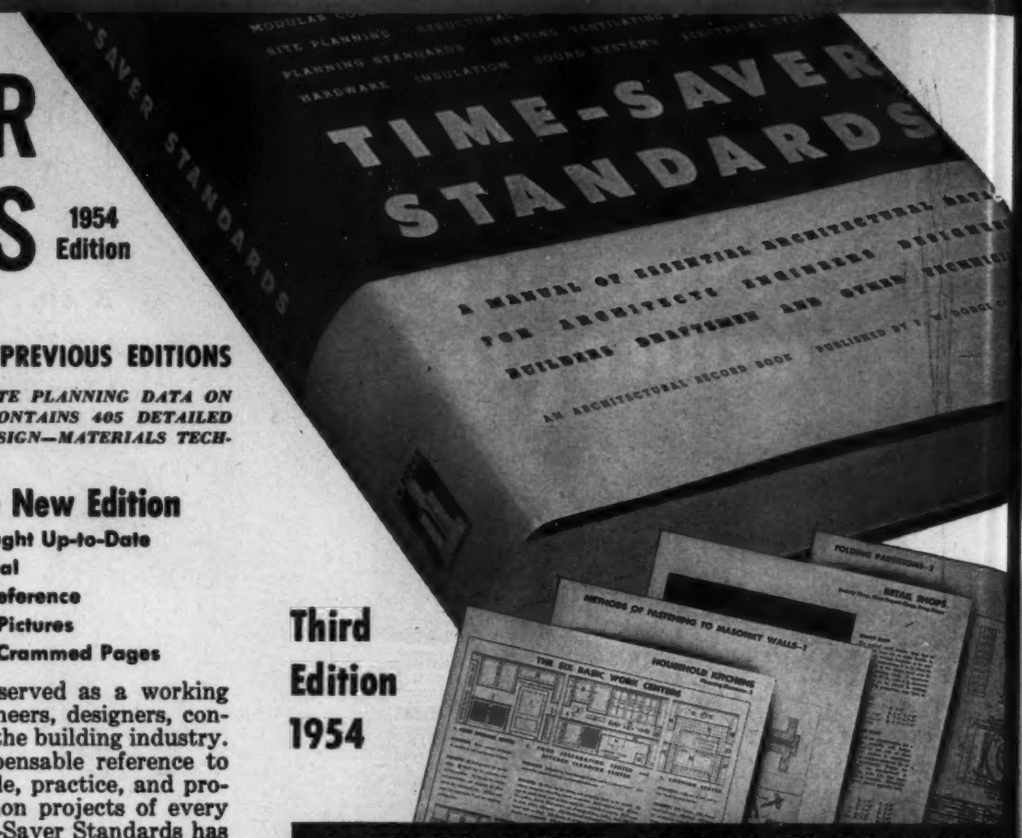
PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

THE MASTER REFERENCE WORK OF ARCHITECTURE AND ENGINEERING IN A BRAND-NEW EDITION!

TIME-SAVER STANDARDS 1954 Edition



MORE THAN 50,000 COPIES SOLD IN PREVIOUS EDITIONS

NOW REVISED AND UPDATED WITH COMPLETE PLANNING DATA ON EVERY MAJOR PHASE OF CONSTRUCTION! CONTAINS 405 DETAILED TECHNICAL STUDIES ON: ARCHITECTURAL DESIGN—MATERIALS TECHNOLOGY—ENGINEERING PRACTICE.

Outstanding Features of The New Edition

Completely Re-organized and Brought Up-to-Date
Includes Four Years of New Material
Nine-page Master Index for Fast Reference
405 Technical Studies in Text and Pictures
1895 Individual Topics—888 Fact-Crammed Pages

Since 1946 Time-Saver Standards has served as a working partner to thousands of architects, engineers, designers, contractors, and other skilled technicians in the building industry. Users consider this book the one indispensable reference to almost any question of building principle, practice, and procedure. As a working tool on construction projects of every size, description, and dollar value, Time-Saver Standards has saved users many hours of research time, immeasurable extra work, and many costly mistakes—and has saved clients millions of dollars on construction costs.

Collected in this massive volume are thousands of streamlined practices that allow major economies on labor and materials. Proven-in-use solutions to baffling problems and authoritative answers to all questions of structural design, site preparation, and uses of materials can be found in its pages, as can positive help on all matters of size, area, weight, volume, arithmetic formulae, physical properties of substances, and drafting specifications of every kind. No single lifetime would suffice to accumulate so much practical knowledge. Time-Saver Standards contains the hard-core, hard-won experience of thousands of men who have devoted their careers to architecture and building engineering. As such, it is a treasury of information whose value cannot be measured in money.

This latest edition is printed from new plates to assure clear, sharp reproduction of the thousands of photographs, drawings, charts, sketches, and tabular data sheets. Page headings are set in bold, legible type and are uniform throughout. A handsome and durable binding gives this book a distinctive appearance in keeping with its incomparably fine contents.

888 pages 8½ x 11 Approx. 2000 Illustrations $12.50

Provides Quick, Reliable Answers to Thousands of Questions Like:

- What are the standard symbols for various elements of heating, air conditioning and plumbing systems?
- What formula will compute areas of circular segments? Volumes of solids?
- Which is less costly in a small house? Pre-assembled wood roof trusses, or rafter and joint construction? What is the approximate cost differential?
- What is the simplest way to compute steel beam or girder deflection under various conditions of load?
- What are the advantages and drawbacks of lightweight aggregates? How are they classified? What are the properties of each type?
- What are the advantages of pre-stressed concrete? Its characteristics? Its uses? Its costs?
- How can modular co-ordination be applied to masonry construction? To wall framing of houses?
- How can one compute the thrust produced by a brick arch used to span an opening?
- What procedures are recommended for remodelling foundation walls? Exterior walls? Floors?

BRAND-NEW MATERIAL ADDED TO THE THIRD EDITION

A mass of new material now brings Time-Saver Standards entirely up-to-date on recent advances in building technology. Following are a few of the technical studies now included for the first time:

CHARTS OF WORKING HEIGHTS FOR SCHOOL CLASSROOM EQUIPMENT
MODULAR CO-ORDINATION
CLASSIFICATION SYSTEM FOR ARCHITECTURAL FILES
HARDWARE: INDEX TO USES OF LOCK FUNCTIONS
INSTALLATION OF GAS APPLIANCES
RADIANT HEATING HOT-WATER SYSTEMS FOR HOUSES
STRUCTURAL DESIGN: RIGID FRAMES IN STEEL
STRUCTURAL FORMS: LONG SPANS IN WOOD
STRUCTURAL FORMS: THIN SHELLS OF REINFORCED CONCRETE
STRUCTURAL FORMS: PLYWOOD GIRDERS AND GLUED LAMINATED BEAMS
FIREPROOFING WITH LIGHTWEIGHT PLASTER
ARCHITECTURAL PORCELAIN ENAMEL
METAL LATH MEMBRANE FIREPROOFING
STAINLESS STEEL
SCHOOL SHOP PLANNING
ROOF TRUSSES: CONSTRUCTION METHODS
NORTH AMERICAN BUILDING STONES

IMPORTANT: Publication of this new 3rd Edition automatically outdates every other reference book on architectural standards. If you have never used Time-Saver Standards, now is the time to begin. If you own an earlier edition, you will certainly want to replace it with this revised and entirely up-to-date 3rd Edition.

▼ 10 DAY FREE EXAMINATION PRIVILEGE

Dodge Books
119 West 40th Street
New York 18, N. Y.

Please send me for 10 days free examination a copy of TIME-SAVER STANDARDS, 3rd Edition (1954). Within 10 days I will either send payment for $12.50, plus postage, or else return the book and owe nothing.

Name.....

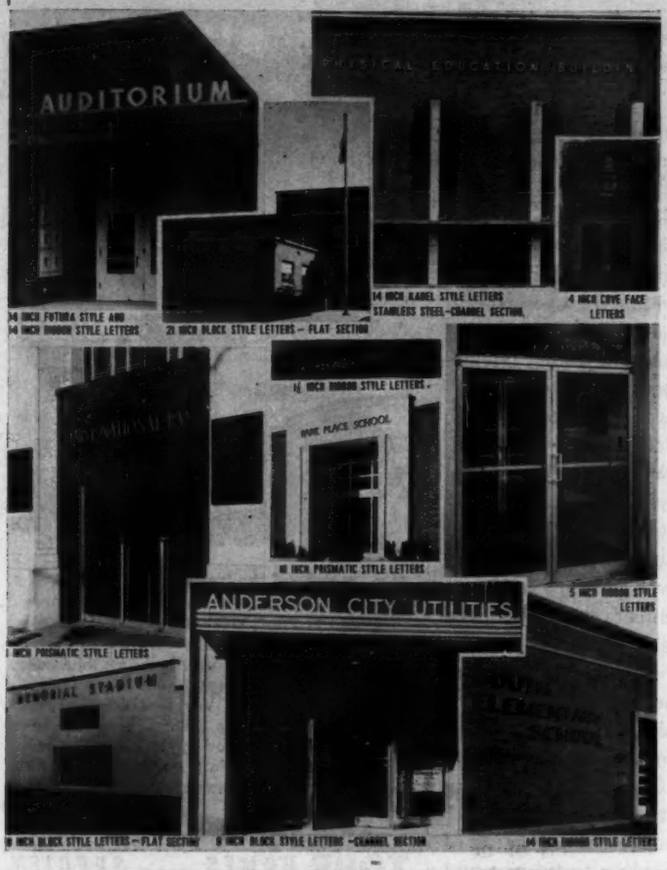
Address.....

City.....Zone....State.....

SAVE POSTAGE: Enclose payment with this order and publisher will pay all handling and postage charges. Same return privilege.

92

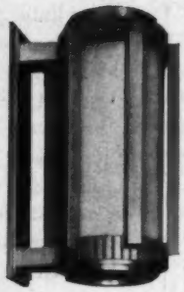
We produce ARCHITECTURAL LETTERS



in Bronze, Aluminum, Stainless Steel

Bronze & Aluminum TABLETS PLAQUES, SIGNS

INDUSTRIAL NATIONAL BANK



LIGHTING FIXTURES in Ornamental Bronze, Aluminum, Wrought Iron

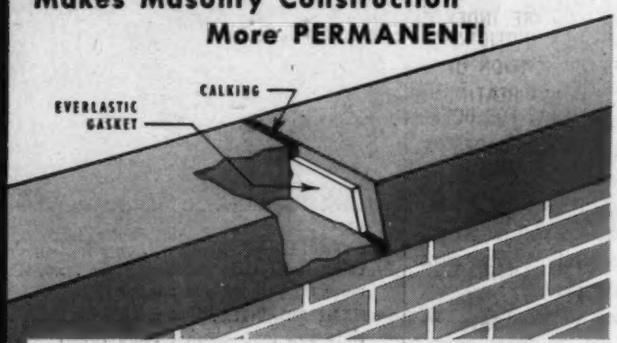
Estimates and Illustrated Catalog Sent on Request.

MW METALCRAFTSMEN

MEIERJOHAN • WENGLER
METALCRAFTSMEN
1102 W. 9th St. CINCINNATI 3, OHIO

EVERLASTIC MASONRY GASKET

Makes Masonry Construction More PERMANENT!



Coping stones and sill stones should remain permanently fixed in their mortar beds. Everlastic Gaskets permit linear expansion in summer heat and prevent frost damage in winter. The EVERLASTIC MASONRY GASKET is a wholly non-absorbent elastomer. It is a readily compressible joint filler which is inert to heat, cold, oils, alkalies and atmospheric acids . . . and, it is impervious to water. It is furnished die-cut to specifications and coated with pressure sensitive adhesive for use between sill and coping stones, brick and stone wall panels, and other places where expansion, contraction and freezing action will destroy masonry construction. See Sweet's, or write for information.

WILLIAMS EQUIPMENT and SUPPLY COMPANY
16651 Baylis Avenue • Detroit 21, Michigan

The only complete vibration control engineering service for architects

What can you do to secure effective vibration isolation of mechanical equipment in buildings?

The answer is simple. Bring in Finn. Vibration control of all types is our specialty, and we have applied it successfully in hundreds of commercial and industrial buildings.

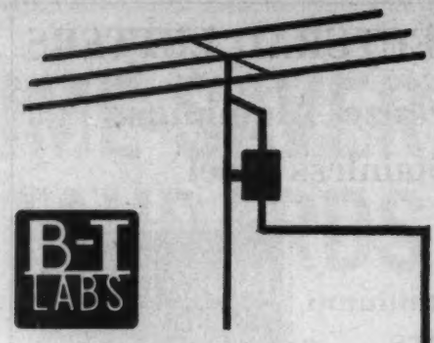


But first, to get acquainted, write us for a copy of the new Finn catalog. It explains vibration and shock control, and shows Finn's entire line of mountings, hangers, flexible pipe connections and isolating materials —a line that makes possible the *only complete* vibration engineering service available today.

T. R. Finn & Co., Inc., Industrial Division
200 Central Avenue, Hawthorne, New Jersey

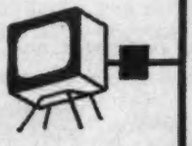
VIBRATION CONTROL FINNFLEX

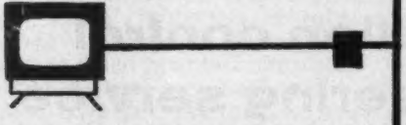
FINN
Specialists in shock and vibration control



B-T LABS

OFFERS YOU FREE ENGINEERING CONSULTATION SERVICE ON MASTER TV SYSTEM INSTALLATIONS





Will discuss TV distribution problems or provide actual system layouts for specific building plans.



Write for Free Manual

BLONDER-TONGUE LABS., INC., Dept. DJ-14
Westfield, New Jersey

☐ Please send your FREE Manual on Master TV System Installation

☐ Please arrange for your representative to call upon us

Your Name.....

Firm Name.....

Address.....

City..... Zone..... State.....

B-T LABS Leading Manufacturers of Master TV System Amplifiers, Distribution Units, Converters, Boosters, and Accessories

THE RECORD REPORTS

R.I.B.A. CONFERENCE

(Continued from page 17)

ranged over such things as the organization of architects' offices, the supply of assistants, relations with the builder, the need for and possibilities in preplanning, the training of foremen and apprentice craftsmen, productivity and methods of interesting the operative in the job. But the principal recurring topic was the obtaining of tenders ("bids" to an American). The open advertised tender was generally condemned, as being liable to let in mere speculators and "men of straw" who were not real builders. "Selective" tendering, i.e. by using a list of known competent firms, was approved, although in work requiring state loans it was contrary to official practice. A few members spoke up for the "negotiated tender" with a single contractor, especially for urgent jobs where money lost to the client by the more leisurely other methods might well exceed any saved on the construction by closer tendering. One member, arguing against any form of "closed shop" among builders, suggested a grading of building firms according to the size and class of job they could undertake, with provision for moving firms up from grade to grade; this would not exclude the young, newly-started firm, but would ensure competence at every level. Another suggested that some system of forecasting oncoming building work in each area was needed.

On the question of job organization by the architect, David Woodbine Parish got in a shrewd blow by saying that there were some architects for whom he always added five per cent to his tenders to cover the delays and variations that he knew from experience would occur. But, he added with a smile, "There are others for whom I am glad to discount my tenders by as much as two and a half per cent." Sir Thomas Bennett countered by saying that builders seemed to have two, or even more, classes of workmanship. Quite regardless of the amount of the tender, they provided a better class of workmanship on a bank building than on a block of flats. But these exchanges were the nearest approach to any kind of fireworks in the discussion. At the end, Sir Thomas provided a list of points and recommendations for the R.I.B.A. Council to consider, where necessary, with other sections of the industry.

(Continued on page 390)

MY HOMES ARE BUILT TO SELL!



says prominent builder, MARTIN BARTLING, chairman of the NAHB construction committee, chairman of the NAHB components conference. "The most important 'built-in' to put in a home is customer appeal . . . features that catch the eye and turn prospects into buyers. That's the big reason I use Veni-Flex Folding Doors in many of the homes I build. The decorative appeal of woven wood gives an extra touch to contemporary interiors, as well as affording more space by eliminating troublesome 'door swing'."

ADD SALES APPEAL TO **YOUR** HOMES . . . SPECIFY

VENI-FLEX

WOVEN WOOD FOLDING DOORS IN YOUR BUILDING PLANS



Veni-Flex meets these important specifications:

- DURABLE HARDWARE . . . only folding door using brass roller hardware . . . smoother, more rugged for years of service.
- HIGH QUALITY . . . top-grade basswood slats and long-wearing seine twine.
- EASY TO INSTALL . . . cuts construction costs.
- SPACE-SAVING . . . eliminates "dead" corners, inaccessible closets.
- DECORATIVE . . . wide choice of exciting colors.
- VERSATILE . . . ideal for closures, room division, room separation, special effects.

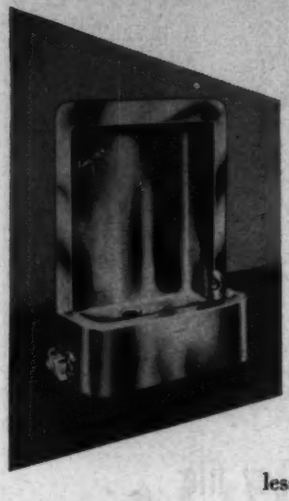
WRITE TODAY FOR COMPLETE INFORMATION!

CONSOLIDATED GENERAL PRODUCTS, INC.
P. O. Box 7425R, Houston 8, Texas
P. O. Box 559R, Waukesha, Wisc.

CONSOLIDATED GENERAL PRODUCTS, INC.

"INDESTRUCT" STAINLESS STEEL WALL FOUNTAIN

by Filtrine



3 models | recessed | semi-recessed | non-recessed

In lustrous, hand-polished stainless steel, INDESTRUCT fountains transform a utility item into a new feature of modern design . . . gracefully formed, with satin finish, to blend with fine contemporary interiors.

By virtue of heavy-gauge, 18-8 seamless construction and timeless simplicity of style, INDESTRUCT defies obsolescence . . . will not chip or crack . . . keeps modern beauty for life of the building.

As specified for:

Seaman's Savings Bank
NEW YORK
Screen Directors' Guild
LOS ANGELES
Rogers High School
NEWPORT, R. I.
Liberty Life Ins. Bldg.
GREENVILLE, S. C.
Lone Star Steel Bldg.
TEXAS

Write **FILTRINE MANUFACTURING COMPANY**
22 Lexington Avenue ● Brooklyn 38, N. Y.



Nurses Home, Mass. Gen. Hosp., Boston. Shepley, Bulfinch, Richardson and Abbot, Architects. Photo by Robert D. Harvey Studio.

Form round concrete columns with low cost *Sonotubes!*

Beautiful round columns of concrete erected with low cost SONOTUBE Fibre Forms were used in the construction of this Nurses Home.

Specify SONOTUBES for the work you are planning . . . and save construction time, money and labor! Use SONOTUBES for concrete columns, piers, underpinning and piles.

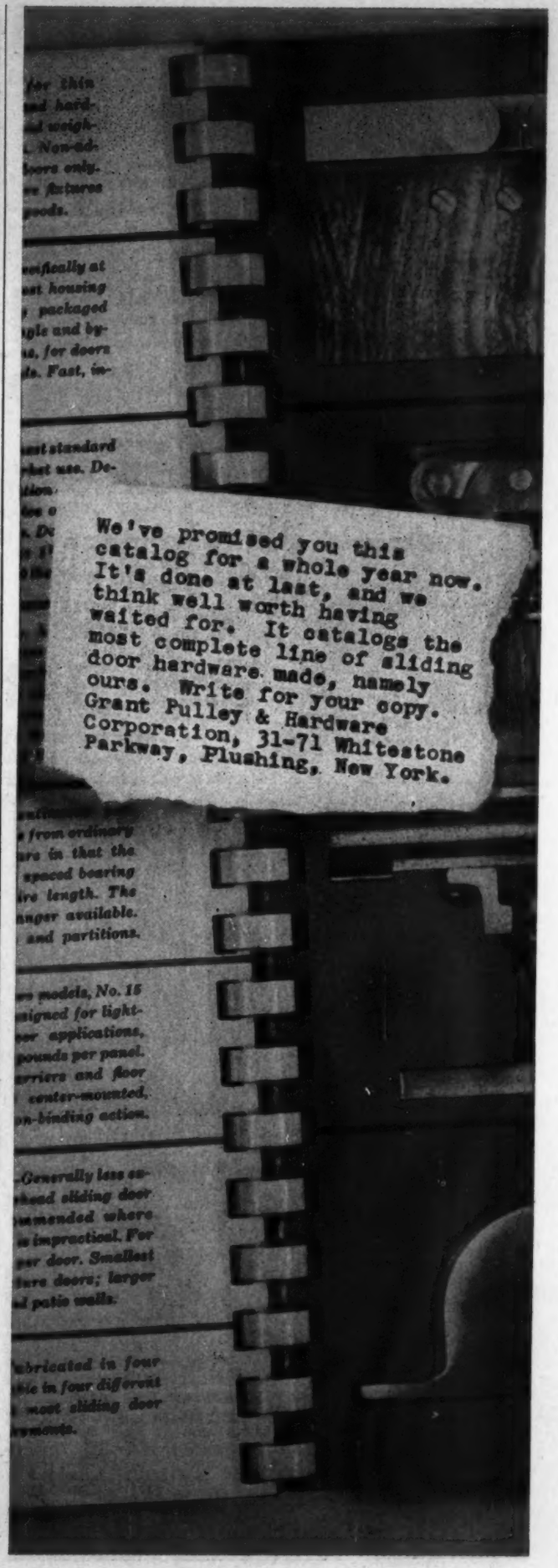
Sizes 2" to 36" I. D. up to 50' long. Patented "A-coated" SONOTUBES for finished columns, wax coated also available. Can be ordered in desired lengths or sawed to requirements on the job.

See our catalog in Sweet's

sonoco

SONOCO PRODUCTS COMPANY
Construction Products Division
LOS ANGELES, CAL. · HARTSVILLE, S. C. — MAIN PLANT · MONTCLAIR, N. J.
AKRON, IND. · BRANTFORD, ONT.

MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.





recessed
downlights
catalog no. 3032

complete incandescent lighting equipment

- concentric rings for classrooms
- gymnasium lighting
- corridor lighting
- cafeteria lighting
- dormitory lighting
- special lighting instruments fabricated to your specifications



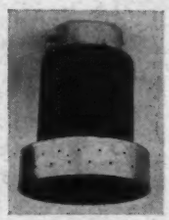
adjustable
recessed
downlights
catalog no. 5054

catalogs on request

belmar lighting company

garnerville, n. y.

phone: haverstraw 9-5751



perforated skirted
recessed downlights
catalog no. 1051



Moke® (RHYMES WITH O.K.)

an exciting NEW *way of decorating with* **FIR PLYWOOD**

Create bold, colorful designs by "weaving" slits in fir plywood with dowels or other inserts. For dramatic lighting effects, room dividers, doors. Send for free booklet of ideas and suggestions.

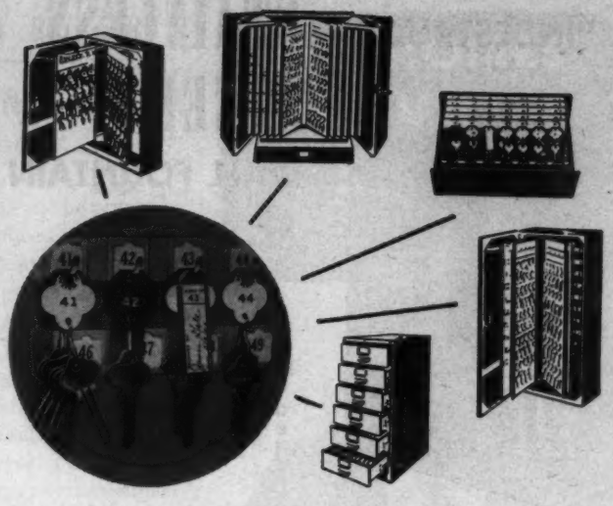
FREE BOOKLET

DOUGLAS FIR PLYWOOD ASSOCIATION
Dept. 50, Tacoma 2, Washington (Good USA Only)
Please send me booklet of Moke' ideas.

Name _____

Address _____

City _____ Zone _____ State _____



Much more than just a key file . . .

Because behind each unit there's the incomparable TelKee "complete" key control system. It's the *only* system that offers your clients maximum security from the moment locks are installed. And afterwards TelKee means real maintenance convenience and economy, plus lifetime insurance for a building's locks. But for the full story send for our FREE catalog No. AR 23 today.

The **MOORE KEY** TEL KEE **CONTROL®** *Systems*

P. O. MOORE, INC., 300 FOURTH AVENUE, NEW YORK 10, N. Y.

they all know the best place in Cleveland



"Hotel Cleveland, sir?"

Whether you arrive by train, plane or car, the friendliest place to stay is Hotel Cleveland, in the heart of the city . . . directly connected with Union Passenger Terminal.

Hotel Cleveland

NO ROOM CHARGE FOR CHILDREN UNDER 14 WHEN REGISTERED WITH AN ADULT.

SONNABEND OPERATED HOTELS
Distinguished American Landmarks

CHICAGO: Edgewater Beach Hotel
BOSTON: Hotel Somerset
NEW YORK CITY: Ritz Tower Hotel
CLEVELAND: Hotel Cleveland





The Old Colony Bank, Chicago, Ill. Architects: Graham, Anderson, Probst & White, Chicago. Furnished and installed by Kaufman & Brodt, Inc., Chicago. Alumiline Entrance Doors, Sidelights and Frame materials were used in conjunction with the Revolving Door by International.

ALUMILINE

EXTRUDED ALUMILITED ALUMINUM PRODUCTS

Specified by Leading Architects for:

HOSPITALS • SCHOOLS • RELIGIOUS BUILDINGS • BANKS
STORE FRONTS • OFFICE BUILDINGS • INDUSTRIAL PLANTS
HOUSING PROJECTS • SHOPPING CENTERS

Also Furnished in the New, Non-Fading GOLD LITE

Send for 1955 Catalogs "Alumiline" Store Front Construction and "Alumiline" Entrances and Doors

see our catalog in ARCHITECTURAL FILE or write for copy

THE ALUMILINE CORPORATION

DUNNELL LANE **PAWTUCKET, R. I.**



CUTLER Mail Chutes are installed in leading buildings throughout the world

Cutler Mail Chute Co.

ROCHESTER 7, N.Y.

First the Burnham PACEMAKER*

High Quality — Economical Performance — Low Competitive Cost

This exclusively oil-fired boiler quickly hit the jackpot of popularity . . . and for good reasons: Vertical flue travel over thousands of scientifically proportioned fins, long-life cast-iron construction and plenty of year 'round domestic hot water and many other features.





Then the Burnham PACE-PAK*

A Factory Assembled Cast-Iron Oil Heating Unit Delivered In One Crate Ready For Easy Installation

(2 sizes — for small and larger houses)

A packaged boiler with design based on PACEMAKER. Special oil burner, all controls and wiring factory installed to insure optimum performance with minimum servicing. Also equipped to supply plentiful, year 'round domestic hot water.

Now the Burnham PACE-KING

For Apartment Houses, Schools, Hospitals, Commercial Installations and Larger Homes



Engineered on the same lines as its two predecessors, PACE-KING brings to the larger boiler field a highly efficient vertical-flue-travel boiler — designed for efficient oil firing. These and many other features make it an outstanding buy:

Vertical Flue Travel — Low Stack Temperatures — In 24" of vertical flue travel flue gas temperatures are reduced 800 degrees. Low stack temperatures emphasize the tremendous heat absorbing qualities of PACE-KING's vertical flue travel over thousands of scientifically proportioned fins.

Low Draft Loss — Lower Chimneys — Each section has its own outlet to smokehood—making possible scientifically correct flue ways regardless of the number of sections. Net results are desirable low draft loss and lower chimneys.

Tankless Hot Water Heaters — An unusual large-boiler feature — special all-copper coils delivering 6 to 10 gpm. assure plenty of economical, automatic domestic hot water the year 'round.

Available in 14 sizes with IBR ratings for steam from 1,100 to 4,500 sq. ft., for hot water from 1,925 to 7,200. Sections are reversible and boiler can be fired from front or rear.



** Reg. U. S. Pat. Off.*

Burnham

BURNHAM BOILERS WEAR LIKE IRON BECAUSE THEY'RE MADE OF IRON

BURNHAM CORPORATION
Irvington, New York

Burnham RADIANT HEATING

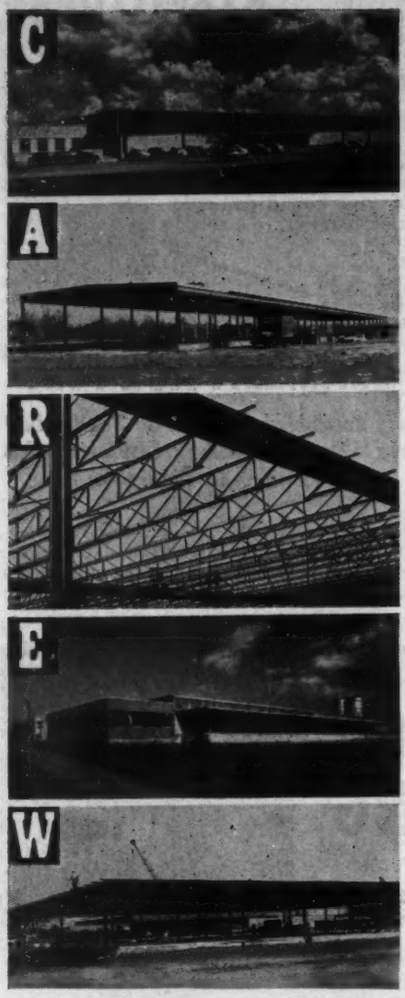
I-B-R

Burnham Corporation AR-95
Irvington, New York

Please send illustrated folders giving full data on

☐ **PACE-KING** ☐ **PACEMAKER**
☐ **PACE-PAK**

Name.....
Address.....
City.....State.....



LONGSPANS
(up to 120′ clear span)
BY CAREW

. . . are open web steel joists conforming to the standard specifications of the Steel Joist Institute and A.I.S.C. Hot rolled sections are used for all members, the top and bottom chords are integral tee sections and all web members are double angles electric arc welded.

Special type trusses can be fabricated to your specifications.

CAREW Longspan brochure on request



CAREW STEEL COMPANY

York 9, Pennsylvania • Phone 27-835

THE RECORD REPORTS

R.I.B.A. CONFERENCE

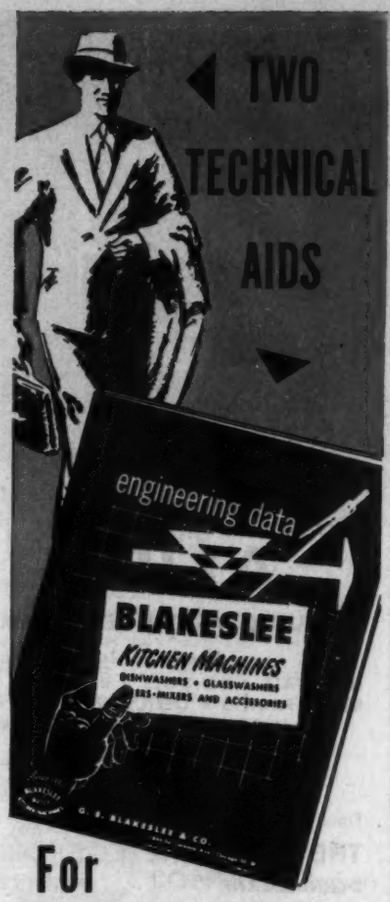
(Continued from page 386)

Harrogate is an inland resort which was once the playground of the wealthy Yorkshire manufacturers of woollens. Today it lives mainly on conferences, as the Mayor admitted at the inaugural session. Architecturally, the town is uninspiring, its Victorian architecture being solid and stodgy, but its hotels are good (they have to be), its parks and gardens are admirably laid out and planted, and it is set amid much beautiful scenery. The town possesses, in the Royal Hall, an excellent building for the holding of conferences, even though it is an example of the most lavish plush, gilt and plaster cupids manner of the Victorians. It is gay without being too vulgar and has an excellent plan. It served equally well for the serious meetings of the Conference and for the full-dress Mayoral reception on the second evening.

The Conference garden party was held on a draughty, cloudy day at Harewood House, the eighteenth century home (by Carr of York and Robert Adam) of the Queen's aunt, the Princess Royal. A Classic building of stone, set in a park, it has interiors of human scale containing a superb collection of pictures and furniture. The music room has a priceless set of embroidered settees and chairs made specially for the room by Chippendale.

The tours were of three types. One was to the City of Leeds where the City Architect is still battling with nineteenth century slums, although the worst have long been demolished; this was primarily a housing and welfare tour. On another tour the County Architect showed off his new office building, where some 200 assistants worked, and the schools and further education colleges which they are providing. The third type of tour was purely scenic, to the country houses and ruined abbeys in which the lovely scenery of Yorkshire abounds. At Fountains Abbey, ruined since the 16th century and carefully preserved as a national monument, someone told of an ingenuous American visitor to Fountains who remarked that the British seemed to be taking a long time to repair their bomb damage.

In spite of a railway strike, some 700 architects attended the Conference and all agreed with Charles Aslin, the President, when he said at the concluding dinner that it was one of the best annual conferences the R.I.B.A. had ever held.



For ARCHITECTS and KITCHEN PLANNERS

Send now for this valuable, complete engineering data sheet on Blakeslee-Built Kitchen Machines. Our experienced representatives are available to help you on any commercial dishwashing department layouts.

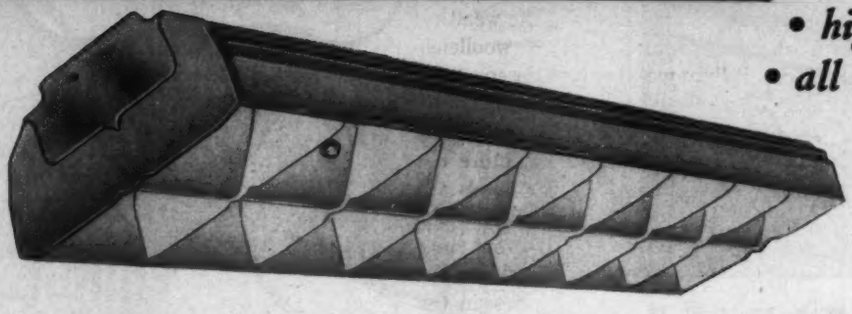
75TH ANNIVERSARY MODELS
NEW—ALL NEW
INSIDE AND OUT

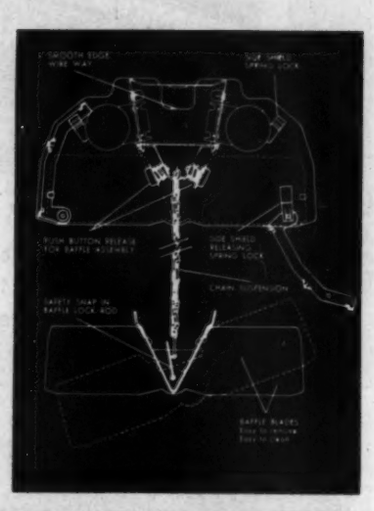
BLAKESLEE
KITCHEN MACHINES
DISHWASHERS • GLASSWASHERS
PEELERS-MIXERS AND ACCESSORIES

G. S. BLAKESLEE & CO.
1844 So. Laramie Ave. • Chicago 50, Illinois
New York—Los Angeles—Toronto

89.3% LIGHT DISTRIBUTION ... Low Brightness

- *more even light*
- *easy installation*
- *easy cleaning*
- *high safety factor*
- *all steel construction*





To be sure your clients get the latest and best in fluorescent lighting, be sure to specify the new Canning-Pekara 15 series on your next school project.

This great new series is available either open or with baffles—is outstanding for design and quality of construction, ease of installation and maintenance.

Canning-Pekara furnishes complete metal fabricating only to the fluorescent manufacturer. Contact your lighting manufacturer for details.

Write to Canning-Pekara, Inc. for data sheet and illumination curves, also catalog on complete line.

CANNING-PEKARA, INC.
2144 North Wood Street, Chicago 14; Illinois
HUmboldt 9-4224

---

another new Dodge book—

MOTELS, HOTELS, RESTAURANTS AND BARS

Here is a new book of immeasurable value to architects and engineers who must design and build commercially profitable motels, hotels, restaurants, and bars. Presented here in vivid text and photographs are many successful projects whose design characteristics not only qualify as good architecture, but also promote good business. Order your copy now to insure prompt delivery of this timely, remarkably useful new book.

WHY IS THIS BOOK IN GREAT DEMAND?

Because: It presents for the first time in one place a detailed study of physical design in motels, hotels, restaurants and bars, and successfully shows the important relationship between good design and good business.

Because: It covers a multitude of case-studies of successful establishments where well-planned, practical design has paid off in flourishing trade and satisfied clientele.

Because: Each case study is profusely illustrated with photographs, plans and structural details which give a vivid picture to accompany the stimulating text — 518 illustrations in all!

Because: The work of hundreds of architects, engineers and designers make this work the most valuable source of planning information in its field.

Because: This book is not a hasty potpourri but the product of eight years of research by the editors of Architectural Record. From the mass of material collected, only those establishments embodying the finest in exterior planning, interior design, structural features and techniques have been selected.

Because: Hundreds of pertinent questions about planning these establishments have been answered for the first time — fully, compactly and in one handy source.

217 pages, large 8¾ x 11⅝" size
518 superbly reproduced illustrations
789 indexed topics and 1225 references
Cloth bound with 2-color jacket.

***a Dodge Book*.....$6.95**

SEND NO MONEY

We will send the book immediately and bill you later. Any Dodge Book may be returned within 10 days for immediate refund without any obligation.

DODGE BOOKS ★ 119 WEST 40TH STREET ★ NEW YORK 18, N. Y.

LETTERS



BY SPANJER

Spanjer letters, a quality product since 1896 are architecturally correct and always in good taste.

Send for FREE 24 page catalog.

Architects
Perkins & Will

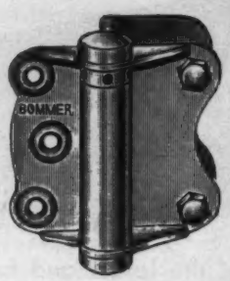
SPANJER BROS. INC.

1158 North Howe Street, Chicago, Illinois
267 Mt. Pleasant Ave., Newark, N. J.

A TRADEMARK SINCE 1876

BOMMER

Write today for complete catalog.



Type BT1013½-3"

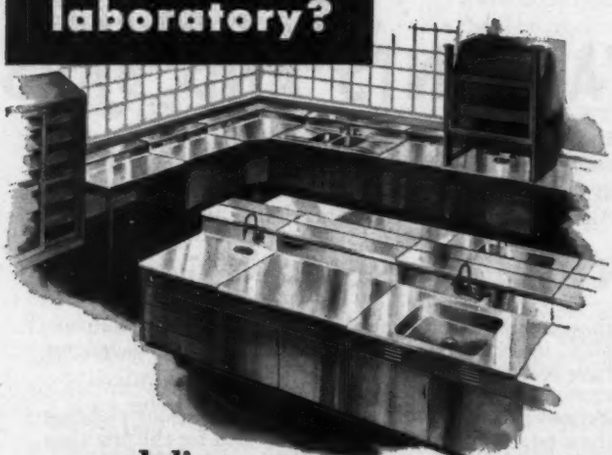
FOR THE BEST IN
SPRING HINGES

Adjustable Clamp Flange Lavatory Spring Hinge for Plywood Doors Where Surface Application Is Desirable.

BOMMER SPRING HINGE CO. INC.

Main Office & Plant: LANDRUM, SOUTH CAROLINA
Chicago Office: 180 N. Wacker Drive, Chicago 6, Ill.
Sales Office
and Warehouse: 263 Classon Ave., Brooklyn 5, N. Y.

planning a laboratory?



moduline simplifies the architect's layout and installation of cabinets and casework for laboratories and hospitals. Consists of sectional steel units of architecturally approved widths and depths; easy to adapt to any building layout. Fabricated of quality materials; stainless steel tops, or choice of wood, stone, Formica, etc.

MAIL TODAY

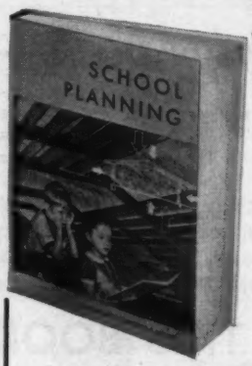
A. S. Aloe Company AND SUBSIDIARIES
1831 Olive St., St. Louis 3, Mo.

Send your brochure: Moduline Unitized Laboratory Furniture.

Name_____

City_____

State_____



SCHOOL PLANNING

by the editors of
ARCHITECTURAL RECORD

Here is a reprint of school projects which first were selected for publication by *Architectural Record*. This large book offers a graphic and textual discussion and analysis of a lengthy cross-section of the best schools produced in recent years.

Including over 100 case histories, *School Planning* represents the work of hundreds of architects and educators, and covers such divergent topics as Cost Analyses, Structural Design, Site Selection, Plot Layout, Equipment Selection and Installation, Materials, and many others.

Over 1,000 illustrations,
456 pages, 8¾ x 11⅝", $8.00

Order today on 10-day approval from

DEPT. 921,
DODGE BOOKS 119 West 40th Street, N. Y. 18, N. Y.



You need data on lighting problems that is complete, yet concise and easy to use. Kayline's Engineered Lighting Handbook No. 55 will save you valuable time on specifying the lighting for all commercial and industrial jobs you do.

Send for a copy for yourself and your specifications writer today. Use a post card or simply attach this advertisement to your letterhead. The Kayline 74 page Engineered Lighting Handbook No. 55 contains charts and information on footcandles of light, light patterns, installation suggestions and other valuable information to make your job easier. Send for it today!



THE KAYLINE COMPANY

Dept. AR • 2480 EAST 22ND STREET • CLEVELAND 15, OHIO

engineered lighting

SINCE 1895

Homes Wired for **Tomorrow** . . .

. . . *are* **'Wired for TV'** *with*

mosley television lead-in wall plate sockets

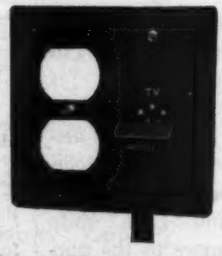
COLOR Television demands a good *outside* antenna installation!

Modern homes are ready for this modern home need when they are equipped with MOSLEY AC/TV Wall Plate Sockets that permit plug-in connection of TV set to antenna at any one of several different locations.

MOSLEY Wall Plate Sockets are low in cost — easy to install to meet requirements of electrical code. They are *TV Engineered* for efficient performance and styled to harmonize with existing electrical wall plates.

Your clients will want their homes *Wired For Tomorrow* . . . Wired For TV with MOSLEY TV Wall Plate Sockets!

MOSLEY TV Wiring Devices are available coast-to-coast. Write for name of nearest supplier.



Type AC-1PK. List Price $1.87

Single TV socket for one antenna lead-in plus matching wall plate for double convenience outlet. Complete with TV Plug, plated machine screws, metal barrier for separating AC and TV services and full instructions. Less bbx and AC socket. In brown or ivory.

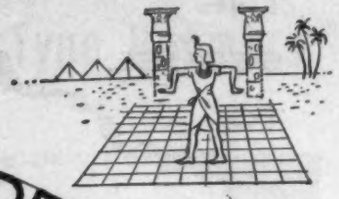
Other types available for multiple lead-in lines and combination lead-in and rotor cable.

S 31c/8i Mo

Mosley Electronics, Inc.

8622 ST. CHARLES ROCK ROAD, ST. LOUIS 14, MISSOURI

AS OLD AS THE PHARAOHS



AS MODERN AS TOMORROW



Summitville

Quarry Tile

■Now is the time to re-discover the versatility, beauty and durability of Quarry Tile.

Yesterday, today—tomorrow, Quarry Tile is truly the tile of the ages. Ceramic tiles in perfect condition have been found in ruins known to be thousands of years old. What better proof is needed for the durability of Quarry Tile?

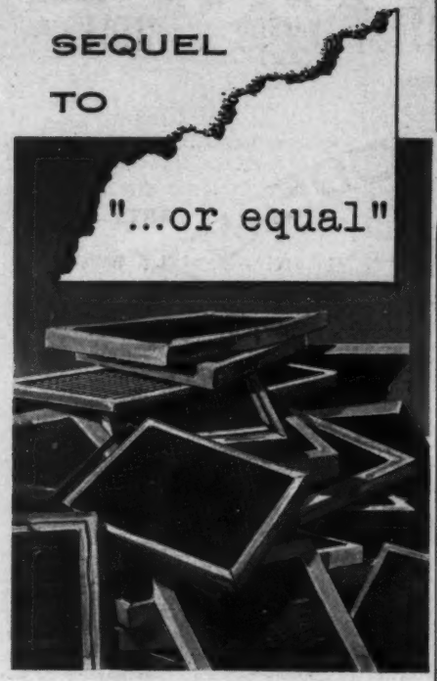
Whenever or wherever, you want a floor or wall that resists acid and scratches, is fadeproof and *never* needs waxing or other surface maintenance, specify famous Summitville Quarry Tile. Inside or outside it's the most durable, versatile and practical material available.

Your Summitville Representative is ready with the full story or write for complete Quarry Tile Data File to . . .

Summitville TILES, INC.

SUMMITVILLE, OHIO

HERE'S THE SEQUEL TO "...or equal"





When you see this specification..."FAR-AIR® filters or equal" remember that these filters *have no equal.* Substitutes mean contributions to the junk pile and higher eventual costs, so it pays to install the finest—FAR-AIR.

In FAR-AIR you get filters that handle more air with greater efficiency. Because of their greater dirt-holding capacity, you save up to 60% in maintenance. The "lifetime engineering" of FAR-AIR filters with their heavier frames, reinforcing rods and other features, insures that each unit will continue to operate with replacements virtually eliminated.

Yes, you'll want to use FAR-AIR filters eventually, so why not install them initially. Write for complete catalog information to:

FARR COMPANY, P.O. Box 45187, Airport Sta., Los Angeles 45, Calif.



Send for your copy showing complete specifications on the FAR-AIR line of quality filters.

FARR COMPANY
NO COMPROMISE ON QUALITY
Los Angeles, New York, Chicago
New Orleans

THE RECORD REPORTS

REVIEWING THE RECORD

(Continued from page 24)

of a more regular and formal grammatical structure, and the disadvantage of being dead."

Schuyler was in favor of the return to college architecture of Gothic, a style which he said "is the very principle of progress, and, faithfully applied to modern conditons, would result in architecture as unlike in form as kindred in spirit to the mediaeval building in which thus far it has found its most triumphant expression."

He pointed out, however, that the selection of style had been dictated not entirely by preference, but equally by the necessity of conforming to the buildings already on the site, in particular the library, built in 1841 (shown above).

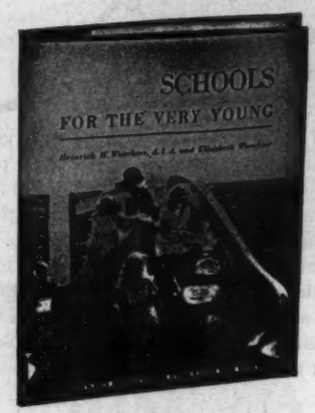
That the government had been willing to consider another style was indicated by Schuyler's remark in 1903: "That clause in the program which left the competitors at liberty to ignore the existing buildings, always at their own risk, but with the assurance that the ignoring would not throw their designs out of consideration, had the air of readiness on the part of the authorities to be ravished by something rich and strange and undreamed of in their practical philosophy."

What the authorities got was perhaps not "rich and strange," but Schuyler commented approvingly, "I know of no modern structure which emulates the particular impressiveness of the fortified abbey [Mont St. Michel] as the new work at West Point."

The critic found particularly worthy of the campus the new Chapel, which, in spite of some structural illogic, "is worthy of its acropolitan preëminence. . . . Architecturally it 'belongs' as distinctly to the landscape as to the architecture underneath. Question of modes, and tenses, 'Early' and 'Late' quite apart, what could be more to the purpose on this ridge than the arcade of openings enlarged to the maximum, with their supports reduced to the minimum." He praised the entrance portal as well, comparing it to English military Gothic: "It was in their military buildings that the English emulated the vigor and virility which the French imparted also to their churches and it is in their strongholds that there must be sought the proper prototypes of the initial buildings which is to signalize at the threshold, the character of West Point."

Schools for the Very Young

by HEINRICH H. WAECHERT, A.I.A.
and ELISABETH WAECHTER



THOUGH many volumes have been written about school design, "Schools for the Very Young" is — so far as we know — the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school demanded for the proper training of the very young child.

Beginning with a brief yet adequate historical and philosophical background, in which the development of the theory and practice of child education is discussed, the book goes on to describe the pre-school in action, noting the events of the school day and the corresponding environmental needs of the children and their teachers. Examples of existing pre-schools are presented with critical comment. Detailed information is given concerning the space apportionments and arrangements called for by the activities peculiar to such institutions. Since one of the authors is especially concerned with city planning, the relation of the pre-school to its neighborhood and community is analyzed, and the many different types of pre-schools that have developed to meet special conditions are enumerated and explained.

The outdoor space and its proper equipment are thoroughly covered from the standpoint of a capable architect who has given much thought to the problem. Technological problems of construction, lighting, ventilation, mechanical equipment, etc., are scrutinized in the light of the most recent practice. A wealth of illustrations add both interest and information, and a selective bibliography will aid further study.

208 pages, 7⅞ x 10, stiff binding. Price $6.50.

Book Department, F. W. Dodge Corp.
119 West 40th Street, New York 18, N.Y.

Enclosed is $.....for.....copy(s) of "Schools for the Very Young" by Heinrich H. and Elisabeth Waechter at $6.50 per copy. (Add 20¢ for N.Y.C. delivery — $6.70.)

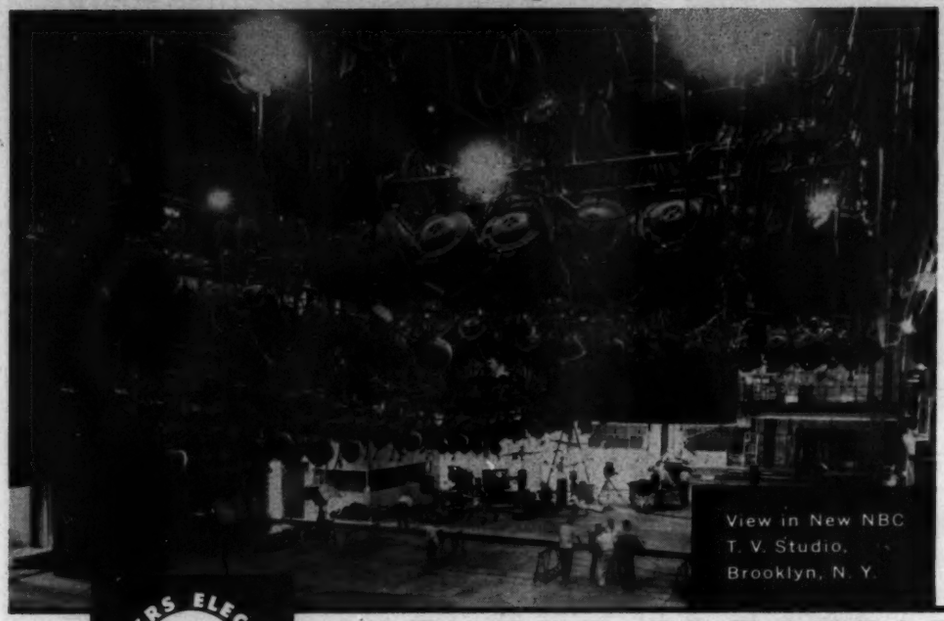
Name.....

Address.....

City..... *Zone*..... *State*.....

921

The Most Elaborate Lighting in Television Specified VICKERS® Magnetic Amplifier Type Dimmers


View in New NBC T. V. Studio, Brooklyn, N. Y.

- DEPENDABLE
- NO TUBES OR MOVING PARTS
- INHERENTLY STABLE
- GREATER EFFICIENCY
- FAST RESPONSE
- FLEXIBLE LOAD CAPACITY
- REMOTE CONTROL
- SPACE SAVING EASILY INSTALLED

WRITE TODAY for new lighting control bulletin.

VICKERS ELECTRIC DIVISION

VICKERS Inc.
a unit of the Sperry Rand Corporation
1861 LOCUST STREET • SAINT LOUIS 3, MISSOURI

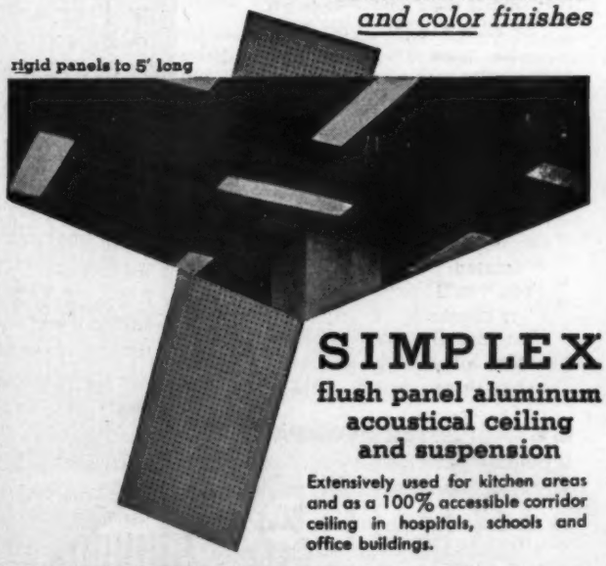
DEDICATED SINCE 1858
to the quality production of
ORNAMENTAL
CAST AND WROUGHT IRON

J.W. Fiske IRON WORKS
ANNOUNCES
EXTENSIVE, NEW FACILITIES
for the production of
Architectural Metal Work
ALUMINUM, BRONZE STAINLESS STEEL

J.W. Fiske IRON WORKS
80 Park Place—New York
ESTABLISHED 1858

SAVES LABOR—*one trade installation*
SAVES MAINTENANCE—*permanent anodized aluminum and color finishes*

rigid panels to 5' long



SIMPLEX
flush panel aluminum acoustical ceiling and suspension

Extensively used for kitchen areas and as a 100% accessible corridor ceiling in hospitals, schools and office buildings.

SIMPLEX CEILING CORP.
552 West 52 Street, New York 19, N. Y.
Name.....
Firm.....
Address.....
City.....Zone....State.....

SEND TODAY for 8-page catalogue 39P. Photos and details of use.



VICRTEX "Coronation" on the walls of the Carteret Savings Bank, East Orange, N. J. means *extra* savings in maintenance dollars!

HERE'S HOW

ORIGINAL

VICRTEX V.E.F.* FABRICS

save maintenance dollars...and make decorating sense!

The beauty of Vicrtex V.E.F.* Fabrics is self-evident! Its deep, 3-dimensional textural interest enriches everything it covers. But its hidden qualities make it second to none for the money it saves year after year! When you specify Vicrtex, even for the busiest spots, you know it will look bright and fresh always with a minimum of care. Won't chip, crack, or peel — almost never needs replacing. Needs no backing or lining, however used. It's economies like these that keep clients happy — for *years!*

Exclusive Vicrtex Features:

- wipes clean with damp cloth
- moisture, stain, soil resistant
- 20 rich, deep-textured patterns
- 36 House & Garden colors
- for hotels, institutions, homes

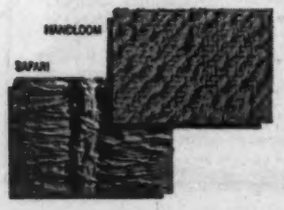
For Idea-packed Brochure 126-J write

L. E. CARPENTER & COMPANY, INC

SALES OFFICE: Empire State Building, New York 1 • Longacre 4-0080

MILLS: Wharton, New Jersey

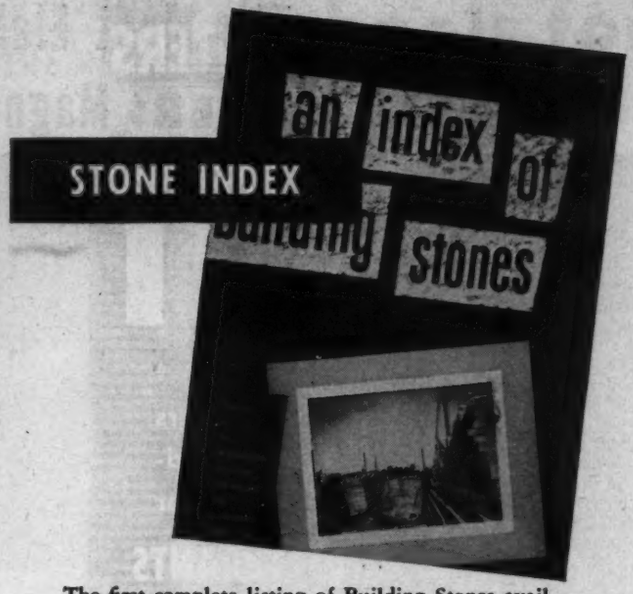
AVAILABLE THROUGH DISTRIBUTORS ALL OVER THE NATION







* vinyl electronically fused



The first complete listing of Building Stones available in the United States and Canada, with detailed descriptions, characteristics and sources. Published by THE STONE COUNCIL and offered to architects, contractors and builders at no cost. See your 1955 Sweets' File — Architectural, or write

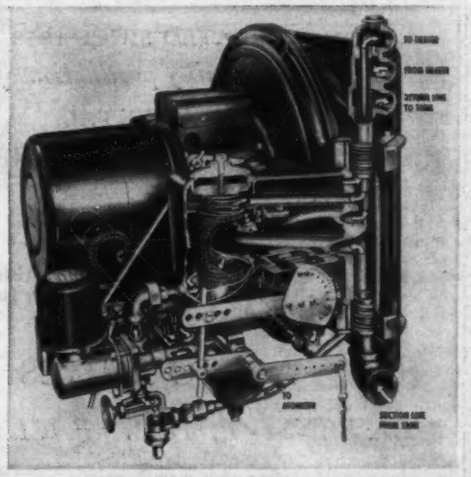
BUILDING **stone** INSTITUTE

Write to Stone Council, a department of Building Stone Institute 1700 Summer Street, Stamford, Conn.

NEW

JOHNSON

Model 53



For

SURER, SMOOTHER "COLD STARTS" BETTER ALL-AROUND EFFICIENCY

This amazing new Johnson 53 virtually eliminates the problem of "Cold Starts" and varying Oil Viscosities. It's a masterpiece of advanced oil heat engineering. Metering Pump Control Quadrant provides calibrated reading of oil being burned. Make it a point to find out what it can do for you. There are 8 sizes from 25HP to 500HP with either Direct or Belt Drive. Combination Oil and Gas Models may be had. May we send you full details?

Johnson Oil Burners

S. T. JOHNSON CO.

940 ARLINGTON AVE., OAKLAND 8, CAL.

CHURCH ROAD, BRIDGEPORT, PA.

FOR DUMB WAITERS
consult
MATOT
SINCE 1888
Designers and Developers of Electrical and Hand-operated Dumb Waiters for
HOTELS • RESTAURANTS
INSTITUTIONS • CLUBS
WAREHOUSES • FACTORIES
Complete data in Sweet's Catalog or write
D. A. MATOT, INC.
1533 West Altgeld Street • Chicago 14, Illinois

FOR MAXIMUM SAFETY
all over your plant use Safety GRIP-STRUT



Pat. Pending

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.



Important Safety Features
★ Fire proof
★ Slip proof
★ Maximum strength
★ Minimum weight
★ Easy to stand on
★ Cool in summer — warm in winter



Big Economy Features
★ For balconies—no extra light needed below—no extra heat.
★ No extra supports necessary—channels are integral part of the material
★ No secondary sprinkler heads needed
★ Self-cleaning
★ Cut and installed like lumber by your own maintenance force
★ Low in original cost

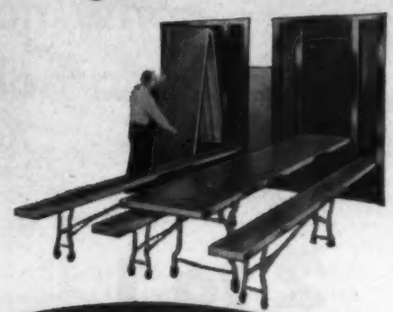
Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

SEND FOR NEW CATALOG

GRIP-STRUT division
THE GLOBE COMPANY • Manufacturers since 1914
4020 S. PRINCETON AVE. • CHICAGO 9, ILL.

Specified everywhere and for good reasons!

Sweet's File 22i/Sc



Schieber
FOLDING TABLES & BENCHES
over-engineered for protection of architects and users

Architects in every one of the 48 states, District of Columbia, Alaska and Canada have specified this multi-purpose-space equipment in the interest of economy in school design. Many are now specifying it for institutions, community halls, fire stations, industrial plants, etc.
Available in wall pocket models remain attached to the wall or detach. Also in portable steel carriers.

Schieber equipment is the original. The first installation made 24 years ago is still in daily use and in good condition.



IN-WALL
PORT-A-FOLD
MOBIL-FOLD

Schieber
SALES COMPANY
Detroit 39, Michigan

REPRESENTATIVES IN ALL AREAS
In Canada
Montreal: Madden-Cummins, Ltd.
Raymond Hardware, Ltd.
Vancouver: LaSalle Recreation, Ltd.



2 to 1 it's Mildew

And the answer is paint fortified against mildew attack—with

SUPER AD-IT.

(di [phenyl mercury] dodecenyl succinate)

Mildew is a microscopic fungus that attacks the finish, slowly destroying the protective effectiveness and beauty of even the finest paints. Every hour of every day mildew is busy disfiguring painted surfaces all over the United States.

A recent nation-wide survey reported that mildew was the cause of paint discoloration in 68% of the cases! And you can't wash mildew away.

Five years ago the battle against mildew was costly and even dangerous. Today, with the addition of chemical fungicides to paints, mildew is in retreat. Perhaps the finest and most widely effective of these fungicides is Super Ad-It.

450 paint manufacturers can't be wrong! In less than five years, 450 firms have accepted Super Ad-It as the most effective *fungicide* for alkyd and oil paints, and Super Ad-It also imparts *mildew-resistance* to all standard aqueous systems.

So be sure the paint you specify is mildew-resistant—that it contains Super Ad-It—(di [phenyl mercury] dodecenyl succinate). The cleaner looking, longer lasting paint jobs you get will prove our story. You'll be glad you specified Super Ad-It . . . and so will your clients.

Write today for illustrated folder on the control of mildew—showing the detailed results of our nation-wide survey. You will find this folder particularly valuable if you have a current mildew problem—interior or exterior—in either residential or industrial construction.

NUODEX

NUODEX PRODUCTS CO., INC.
Elizabeth, N. J.

Plants in Elizabeth, N. J., Newark, N. J., Long Beach, Calif., and throughout the world

A SUBSIDIARY OF HEYDEN CHEMICAL CORPORATION

WASHINGTON REPORT

BRAB STUDY ON SLABS

(Continued from page 26)

terials is incomplete, the effect on thermal conductivity of moisture present in the insulating material not fully known. The need for coatings or protective covering of the insulation should be determined.

8. Development of perimeter insulating materials that can be used on the exterior of foundation walls.

9. Improvement of adhesives for floor finishes, especially their ability to resist the action of moisture, vapor and alkalies.

10. Investigation of the maximum dimensions in which an unreinforced slab-on-ground may be constructed to avoid harmful cracking of the slab, or movement damaging to partitions placed on the slab. This information is needed for both heated and unheated slabs.

Field testing of full-size houses was recommended to determine seasonal moisture content of soil beneath houses with slab-on-ground floors. The BRAB advisory committee defined areas in which useful data could be developed in field tests, but did not feel ready to spell out a test program based on the construction of new houses built specifically as test facilities.

FHA's current contract with BRAB covering such matters as the slab-on-ground research study continues through next June 30. FHA has told the Board it desires detailed information on the following subjects (but under the contract it can drop, add or substitute areas for study):

1. Protection against decay and termites in wood frame construction.

2. Development of data for establishment of performance standards for domestic hot water heating equipment.

3. Anchorage of exterior walls to various types of foundations.

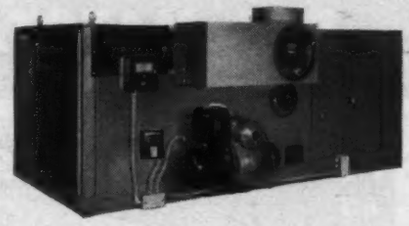
4. Effect of automatic sequence washing machines on individual sewage disposal systems.

5. Establishment of criteria for development of testing procedures by which vapor barrier materials may be used under concrete slab floors as ground covers in crawl spaces.

6. Development of data necessary for establishment of standards for installation of wood block finish floors.

7. Cracking of concrete face brick and data necessary for establishment of standards for its manufacture and installation.

4 big reasons for choosing J-C SUSPENDED FURNACES



1. **easy placement in out-of-the way locations**
2. **savings in valuable floor space**
3. **limitless zone heating possibilities**
4. **super-size for larger commercial and industrial use**

And, of course, the biggest reason for choosing from the pioneer line of Jackson & Church suspended furnaces is that every J-C unit is carefully engineered for performance, economy and dependability. In outputs from 80,000 to 1,000,000 Btu!

J-C . . . America's Largest and Most Complete Warm Air Heating Line!

J-C

JACKSON & CHURCH FURNACE DIVISION

Saginaw, Michigan

KOHLER Electric Plants—specified for stand-by protection when central station power fails



Model 35R81
35 kw., 115/208 volt AC.
Remote starting.

Stand-by electricity in architects' specifications insures automatic protection *before* an emergency. Increasing dependence on electrical equipment makes it imperative that critical loads be taken over without delay.

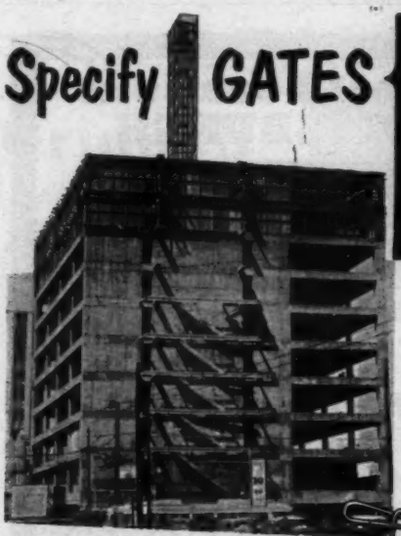
In hospitals, Kohler stand-by plants maintain nurses' call bells, operating room and exit lights, elevators, iron lungs, baby incubators, X-rays, sterilizers. Schools, stores, theatres use them to prevent panic caused by sudden darkness; homes, for automatic heat, refrigeration. They prevent costly interruptions in hatcheries, greenhouses, motor courts, refineries, sewage treatment and filtration plants, communication systems, filling stations, bakeries. Sizes, 1000 watts to 35 KW. Write for folder B-24.

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

Specify GATES Break-Back Form Ties for concrete construction



Gates Break-Back Ties were used on this 13-story parking garage in Dallas by the O'Rourke Construction Company of Dallas.



- There's positive break-back because of Gates patented coating. Small holes are easily filled.
- They're zinc coated and twisted to form leak-proof chemical and mechanical bonds.
- They're versatile! For foundations, abutments, high wall construction...with sheathing, plywood, or metal panels.
- They cut costs, save time and money!

For additional information on Gates Form Ties, contact the nearest Gates Dealer or write to:

GATES & SONS, INC.
80 S. GALAPAGO, DENVER 23, COLO.

new ceramic tile booklet Free



Valuable planning help on School and Hospital jobs

Color photographs and tile descriptions for a variety of actual installations in schools and hospitals. The many ideas it contains for planning school and hospital jobs make this new booklet valuable for architects.

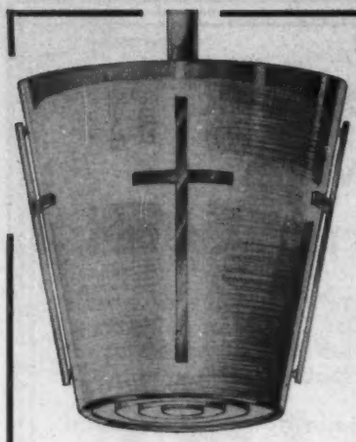
Send for your free copy today!

See our Catalog in Sweet's Architectural File.

American-Olean Tile Company

1082 Cannon Avenue, Lansdale, Pa.
Please send me a free copy of Booklet 600.

Name_____
Firm_____
Address_____
City_____ Zone____ State_____



FOR CHURCHES AND PUBLIC BUILDINGS

Sightsaver

LIGHTING

- PIONEER in Modern Engineering Efficiency
- CREATOR for Better Architectural Symmetry
- LEADER in New Production Control Methods
- COORDINATOR for Assistance When Needed

REQUEST CATALOG J ON YOUR LETTERHEAD

R. A. MANNING CO.
BOX 643 SHEBOYGAN, WIS.

Checker
HAT AND COAT RACKS



No. 25 portable 5 ft. against-wall rack holds 25 coats and hats



No. 50 This 5 ft. portable rack holds 50 coats and hats

CHECKROOM EFFICIENCY ANYWHERE

Keep coats and hats out in the open, aired, dry and in press—each coat on a wooden hanger held spaced apart from every other; each hat in its individualized space on a ventilated shelf. Save floor space—accommodate 5 people per square foot. Rigidly built for lifetime service—welded heavy gauge and square tubular furniture steel. Beautifully finished baked-on enamel. Portable units come on large swivel casters. Checker Wall Racks are also available in any length by the foot—fit in anywhere. Mount on wall at any height—standard equipment in modern schools, etc. where they keep clothes in a safe, sanitary, orderly manner.

Write for Bulletin CK-52

VOGEL-PETERSON CO.

"The Checkroom People"

1121 West 37th Street — Chicago 9, U.S.A.



Enhancing

beauty

Add a touch of beauty and utilitarian design to your decorative motive with Hendrick Perforated Metal Grilles. Your clients will go for that extra elegance they add to a room.

Hendrick Perforated Metal Grilles provide more-than-ample open area for free passage of air and are available in over one hundred attractive basic designs to choose from. And they're easy to install because they always lie flat — they won't bend or warp. For more complete details write Hendrick direct.

Hendrick
MANUFACTURING COMPANY

38 DUNDAFF ST., CARBONDALE, PA. • *Sales Offices in Principal Cities*
Perforated Metal • Perforated Metal Screens • Wedge-Slot Screens • Architectural Grilles • Mitco Open Steel Flooring • Shur-Site Treads • Armorgrids

Handiest Locations in PITTSBURGH

Hotel Pittsburgher
PITTSBURGH, PA.
Diamond Street below Grant



Right in the heart of the Golden Triangle—Hotel Pittsburgher

400 outside rooms with bath. Large-screen television and radio at no extra charge in every room. Air conditioning. Two restaurants. *ATlantic 1-6970*

Hotel Pittsburgher MOTEL

Opposite Greater Pittsburgh Airport on Airport Parkway west. 56 air-conditioned rooms with large-screen television at no extra charge, tile bath, private phone. Courtesy car to and from motel. *AMherst 4-5152*

a Knott Hotel

JOSEPH F. DUDDY, GEN. MGR.

You are specifying

RELIABILITY

when you

select SIGNAL products





Fire Alarm Systems (Interior & Exterior)



Signal Devices



Code Call Systems

Write for Catalogs FSC-7

You can expect complete reliability from products engineered and manufactured by Signal Engineering & Mfg. Company, originators of A-C Fire Alarm Systems and the Underdome Bell. Some of the SIGNAL products of special interest to the building industry are:

★ Interior Fire Alarm Systems (coded and non-coded types) complete with wall boxes, control panels and signal devices,

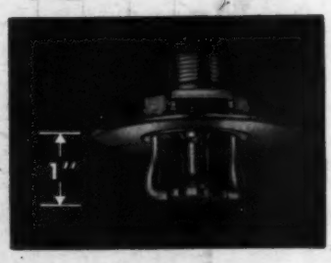
★ Single-stroke and vibrating bells in various sizes; chimes, cow bells and horns

★ Code Call Systems for instant communication with individuals away from desks or benches.

Engineering Representatives in Principal Cities.

Wheelock SIGNAL
ENGINEERING & MFG. CO.
LONG BRANCH, NEW JERSEY

The BEAUTY of Grinnell Flush-Type Ceiling Sprinklers



By planning your fire protection in the blueprint stage, you not only get the most efficient protection, but a system that *harmonizes* with interiors.

Because the Grinnell Ceiling Sprinkler protrudes only 1 inch below the ceiling and is available in a variety of finishes and colors, it is the ideal sprinkler for offices, shops, stores, restaurants, lounges, country clubs. It gives reliable, unobtrusive fire protection.

Grinnell Company, Inc., Providence, Rhode Island —manufacturing, engineering and installation of automatic sprinklers since 1878.

GRINNELL
FIRE PROTECTION SYSTEMS



Rice Lake Medical Clinic
Reception Room,
Rice Lake, Wisconsin

DODGE Vinyl-Cork TILE

...the hard surface floor that's cushioned for comfort

You expect many advantages in a vinyl-top floor—beauty, spot- and scuff-resistance, long wear, safety and easy care—and you get them all with Dodge Vinyl-Cork Tile. But that isn't the end of the story!

It's the cork base of Dodge vinyl flooring that makes it different . . . gives these *plus* values:

cushions each step for maximum comfort
quiets floor traffic sounds
insulates against summer heat and winter cold

The *combined* advantages of the Dodge *vinyl surface* and *cork base* make Dodge Vinyl-Cork Tile the first choice for all types of installation—residential, business or institutional.

And the choice of ten permanent decorator colors and nine striking cork patterns affords wide scope for attractive, original color treatment.

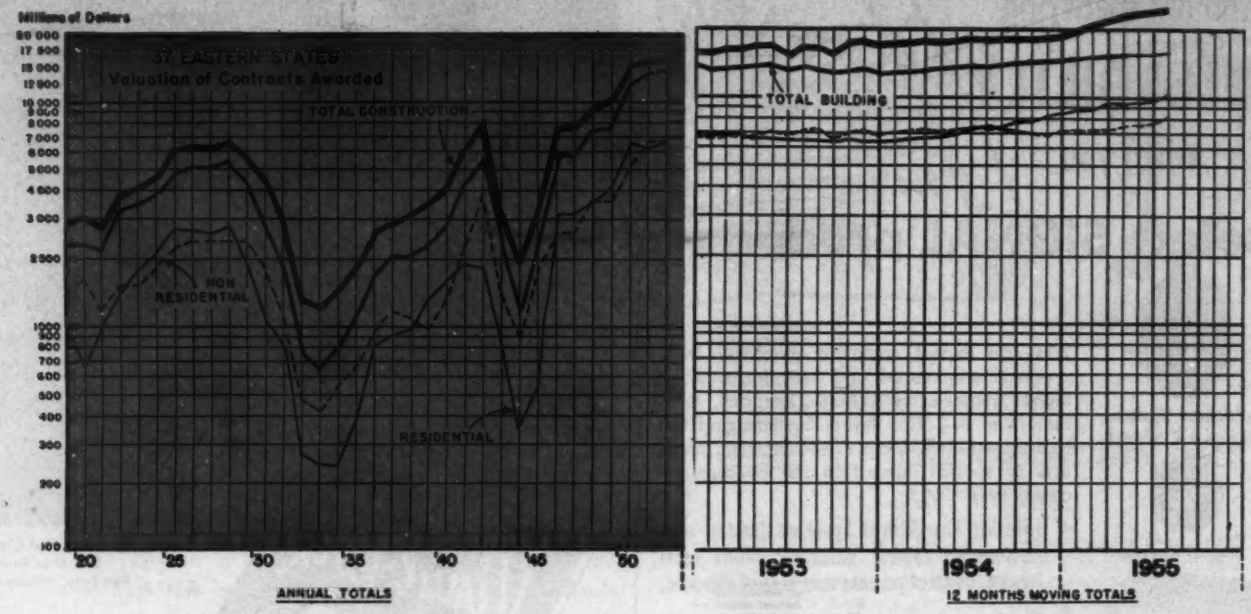
DODGE STANDARD CORK TILE—the finest in standard cork flooring, available in six patterns: light and dark natural random, broad and narrow stripe parquetry, dalmation, Pioneer Plank.

DODGE Vinyl-Cork TILE

topped with Firestone Velon

For complete data, see SWEET'S FILE, Architectural 12i/DO—or write for catalog.

DODGE CORK COMPANY, INC.
Lancaster, Pa.



HIGHS CONTINUE; NONRESIDENTIAL LEADS

With nonresidential construction leading the way, dollar volume of construction contracts awarded in the 37 states east of the Rockies during July, as reported by F. W. Dodge Corporation, set a new record for the month, reaching a total of $2,271,537,000, 24 per cent above July of last year. Nonresidential construction, at $892,629,000, third highest total ever attained in this Dodge category, was up 39 per cent from July 1954; residential, at $959,020,000, up 29 per cent; public and private works and utilities totaled $419,888,000, down seven per cent. The cumulative total for the first seven months of the year also was a record for the period; at $14,254,3 8,000, it represented a 29 per cent increase over the like 1954 period and was, in fact, only slightly below the $14,477,181,000 total for the first *nine* months of 1954. Category totals for the seven-month period: nonresidential, $5,025,142,000, up 24 per cent; residential, $6,415,750,000, up 36 per cent; and public and private works and utilities, $2,813,416,000, up 22 per cent.

Charts by Dodge Statistical Research Service

Source: F. W. Dodge Corporation

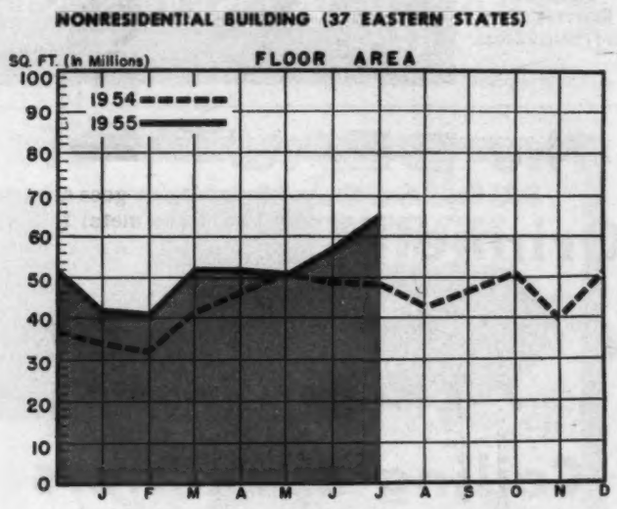
LABORATORIES* AND SCIENCE BUILDINGS
Contracts Awarded—37 Eastern States
Floor Area (in thousands of sq ft)

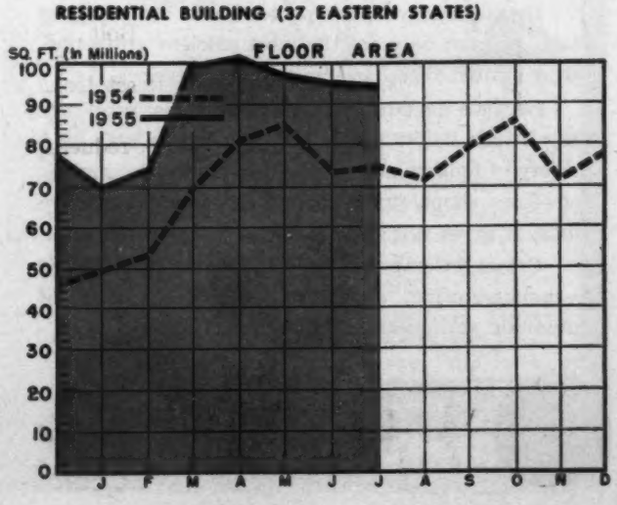
Year	Annual Monthly Total	Annual Monthly Average	Year	Annual Monthly Total	Annual Monthly Average
1938	1178	98	1950	4870	406
1940	1772	148	1951	7603	634
1943	2496	208	1952	7227	602
1947	5252	438	1953	6763	564

Monthly Totals

1954				1955	
Jan.	297	July	433	Jan.	261
Feb.	323	Aug.	734	Feb.	122
Mar.	225	Sept.	768	Mar.	518
Apr.	616	Oct.	325	Apr.	693
May	308	Nov.	612	May	95
June	301	Dec.	491	June	187
		12 months—5433		July	591
				7 months—2467	

*Laboratories are the subject of Building Types Study Number 226 (pp. 201–204)







See how the Nylon insert goes all the way around the latch bolt! Projects slightly above the metal to absorb all the latching punishment.

Now... the Perfect Latch Bolt with a

MOLDED NYLON INSERT!

Gives quieter, easier operation! Shows no sign of wear even after a million closings! Yet it sells for no extra cost!

The new Sargent Latch Bolt... with its truly amazing Nylon insert... is a further improvement for the world's finest lock. The Sargent Integralock.

This Nylon insert greatly reduces friction of the latch bolt on strike areas... and on lock front areas, too.

It enables a door to be closed with 35% less force than a solid metal latch bolt. This reduced closing resistance permits the slowest adjustment of door closers. It makes door closing noiseless. Desirable in all buildings. Especially appreciated in hospitals.

It shows no appreciable wear after *one million* test cycles. Its smooth, self-lubricating surface prevents marring of strike plate. An important appearance feature.

This solid latch bolt with its Nylon insert has no small, complicated parts to break.

Yet with all these advantages, Sargent brings you this Nylon insert at *no extra cost!* Ask your Sargent salesman to show you the Sargent Integralock... with its sensational new Nylon insert... today. Or write Sargent direct, Dept. 7-J.

SARGENT & COMPANY

New York • NEW HAVEN, CONN. • Chicago

SARGENT of New Haven ®

INDEX TO ADVERTISING

A-IC-LC Adam, Frank Electric Co. 141
A Adams-Rite Mfg. Co. 262
A Adams & Westlake Company 40–41
Aerofin Corporation 144
A Aetna Steel Products Corporation 70
Air Devices Inc. 138
A-IC Alan Wood Steel Company 344
A Alberene Stone Corp. 334
A-LC AlliancesWare, Inc. 58
Aloe, A. S. Co. 392
A Alumiline Corporation 389
A-IC Aluminum Company of America 112–113
A-LC Aluminum Window Mfrs. Association 94–95
A-IC American Abrasive Metals Co. 348
A-IC American Blower Corporation 152
A-LC American Brass Company 31
American Chemical Paint Co. 369
American Hardware Corp. 101–254–255
American Machine and Metals Inc. 272
A American-Olean Tile Company 399
American Steel and Wire Division 143
A-LC Andersen Corporation 18, 19, 20, 21, 22, 23
A Anemostat Corp. of America 91–92
A Arcadia Metal Products 36
Architectural Record 350–351
A Armco Steel Corp. 337
A-IC-LC Armstrong Cork Company 132–133
Arrow-Hart & Hegeman Electric Co. 153
Auth Electric Company, Inc. 353
A Avoncraft Division of Avondale Marine Ways, Inc. 63
Bakelite Company 127
A-IC Barber-Colman Company 82
A-IC Bayley, William Company 104
Belmar Lighting Co. 388
A-IC Benjamin Electric Mfg. Co. 44–45
A-IC Bethlehem Steel Company 342, 373
A Bigelow Rugs & Carpets 246–247
A Blakeslee, G. S. & Co. 390
Blender-Tongue Labs, Inc. 386
A Bommer Spring Hinge Co., Inc. 392
A-IC Borden Metal Products Co. 8
A-LC Briggs Manufacturing Co. 147
A-LC Bruce, E. L. Co. 251
A Building Stone Institute 396
Burnham Corporation 389
A-IC Burt Manufacturing Company 280
A-IC Byers, A. M. Company 4
A-IC Byrne Doors, Inc. 284
A Cambridge Tile Mfg. Co. 327
Canning-Pekara Inc. 391
Carew Steel Company 390
A-IC-LC Carey, Philip Mfg. Co. 263
Carpenter L. E. & Company 396
A-IC-LC Carrier Corporation 314–315
A Case, W. A. & Son Mfg. Co. 363
Cast Iron Soil Pipe Institute 381
A-IC-LC Ceco Steel Products Corporation 405
A-IC-LC Cedar Rapids Block Co. 158
A-IC-LC Celotex Corporation 122
A-IC-LC Certain-teed Products Corp. 120
Certified Ballast Manufacturers 111
A Chase Brass & Copper Co. 72–78–79
Chicopee Mills, Inc. 57
A Concrete Reinforcing Steel Institute 115
A Congoleum-Nairn, Gold Seal Division 145
A Connor Engineering Corporation 131
Consolidated General Products Inc. 386
A Coppes Inc. 382
A-LC Corbin, P. & F., Division 101
Couch, S. H. Company, Inc. 362
LC Crane Co. 256–257
A-IC-LC Cupples Products Corp. 43
A Curtis Companies Service Bureau 156
A Curtis Lighting Inc. 240
A Curtis Manufacturing Company 93
A Cutler Mail Chute Co. 389
A Day-Brite Lighting, Inc. 66
A Detroit Steel Products Co. 124–349
A Dicks-Pontius Company 135
Dodge Books 332, 358, 372, 376, 380, 384, 391, 392, 394
A Dodge Cork Company, Inc. 401
A-LC Douglas Fir Plywood Association 258–259, 388
A Dunham, C. A. Company 347
A-IC-LC Dur-O-wal Products, Incorporated 158
A Dwyer Products Corporation 352
Eagle Pencil Company 123
Electro Silv-A-King Corporation 150
A Elkay Manufacturing Co. 312
A Fairhurst, John T. Co., Inc. 366
Farr Company 394
Ferro Corporation 264–265
A Fiat Metal Mfg. Company 88–89
A-IC Filtrine Manufacturing Company 387
Finn, T. R. & Co., Inc. 385
A Fiske, J. W. Iron Works 395
A Fitzgibbons Boiler Company 114
A Fleet of America, Inc. 322
A Flynn, Michael Manufacturing Co. 27
Follansbee Steel Corp. 326
Gates & Sons, Inc. 399
General Aniline & Film Corp. 338
A General Bronze Corporation 303
A-IC General Electric Co., Apparatus 14–49–56
A-IC General Electric Co., Construction Materials 253
A-LC General Plywood Corp. 83
A General Portland Cement Co. 288
LC General Woodcraft Co. 335
A Getty, H. S. & Co., Inc. 108
Globe Company 397
A Gold Seal Div. Congoleum-Nairn 145
A Grant Pulley & Hardware Corporation 387
A Great American Industries, Inc. 77
A-IC Grinnell Company 401
Guth, Edwin F. Company 281
A Hachmeister-Inc. 269
A Haertel, W. J. & Co. 307
Hamilton Manufacturing Company 320
A Haws Drinking Faucet Company 268
A-IC Hendrick Manufacturing Co. 400
A Hillyard Chemical Co. 80
A Hoffman Specialty Mfg. Corp. 149
A Holcomb & Hoke Manufacturing Company, Inc. 76
A-IC-LC Hope's Windows, Inc. 140
Hotel Cleveland 388
Hotel Pittsburgher 400
A-LC Hunter Fan & Ventilating Co. 267
Infra Insulation, Inc. 13
A-IC-LC Inland Steel Products Co. 319, 321
A-IC International Steel Company 316
A-LC Iron Fireman Mfg. Co. SelecTemp Division 159
A-LC Jackson & Church Co. 398
A Jamison Cold Storage Door Co. 345
A Jenn-Air Products Company, Inc. 291
A-IC Jennison-Wright Corp. 242
A-IC Johns-Manville 64
Johnson, S. T. Co. 396
IC-LC Jones & Laughlin Steel Corp. 106–107
A-IC Josam Manufacturing Co. 299
A Kawneer Company 118
Kayline Company 393
A-IC-LC Keasbey & Mattison Company 125, 252
Kendall Company 277
A Kennecott Copper Corporation 78–79
A-LC Kentile, Inc. 96
A Kewanee-Ross Corporation 98
Killark Electric Manufacturing Co. 382
A-IC Kimble Glass Company 68–69
A-IC-LC Kinnear Mfg. Co. 290
Kohler Co. 399
Kwikset Sales & Service Company 1
A LCN Closers, Inc. 248–249
A Larsen Products Corp. 378
Lawler Automatic Controls, Inc. 371
Lewin Mathes 39
A-IC Lewis Asphalt Engineering Corp. 302
A-IC-LC Libbey-Owens-Ford Glass Co. 116, 270
Lincoln Electric Company 134
IC Loomis Machine Company 32
A-LC Louisville Cement Company 59
A Lowell Manufacturing Co. 324
A Loxit Systems, Inc. 339
Lucke, William B., Inc. 286
A Ludowici-Celadon Co. 109
Luminous Ceilings Inc. 370
A-IC Macomber, Incorporated 110
A-IC Mahon, R. C. Company 47
Manning, R. A. Co. 400
A Marble Institute of America 273
A-IC Mario Coil Company 308
Masland Duraleather Company 87
A-IC Master Builders Co. 2nd Cover
A Mastic Tile Corporation of America 151–3rd Cover
A Matot, D. A. Inc. 397
A McPhilben Mfg. Co. 262
A Medari, Fred Products Co., Inc. 65
A Medusa Portland Cement Company 346
Meierjohan-Wengler 385
A-LC Mengel Company 117
Metalab Equipment Company 30
A Michaels Art Bronze Co., Inc. 364
A-IC Mills Company 7
A Minneapolis-Honeywell Regulator Co. 154–155
A-IC-LC Mississippi Glass Company 139
A-IC Modine Mfg. Co. 62
A-IC-LC Monsanto Chemical Co. (Plastics Div.) 331
A Moore, P. O., Inc. 388
A Mosaic Tile Company 305
A-LC Mosley Electronics Inc. 393
A Mutschler Brothers Company 86
National Clay Pipe Mfrs. Inc. 146
A-IC National Electric Products Corp. 97
A-IC-LC National Gypsum Company 333
National Tube Division 148
A Neo-Ray Products, Inc. 295
Nesbitt, John J., Inc. 37
Nicholson, W. H. & Company 128
A-IC Norton Company 38
Nuodex Products Company, Inc. 398
A Onan, D. W. & Sons, Inc. 330
A Otis Elevator Company 34–35
A-IC Owens-Illinois Kimble Glass Co. Subsidiary 68–69
Ozalid Division 338
A-LC Paine Lumber Company, Ltd. 271
Pass & Seymour, Inc. 340
A Peelle Company 239
A Penn Metal Company, Inc. 250
Perfectlite Company 244
IC Permaglas Division 71
A-IC Pittsburgh Corning Corporation 99, 309
A-LC Pittsburgh Plate Glass Co. 90–383

MANUFACTURERS' PRE-FILED CATALOGS

Catalogs of the firms listed below are available in the 1955 Sweet's Catalog Files as follows: (A) Architectural File (green), (IC) Industrial Construction File (blue), (LC) Light Construction File (yellow)

Polyken Products Dept. Kendall Company 277
A-LC Pomona Tile Manufacturing Co. 323
A Portland Cement Association 318
A Powers Regulator Co. 33, 129
A Pratt & Lambert, Inc. 100
A-LC Pryne & Company Inc. 406
A Republic Steel Corp. 282–283
A-IC-LC Revere, Copper & Brass, Inc. 121
A-LC Reynolds Metals Co. 359
Richmond Radiator Company 375
A-IC Ric-wil Incorporated 313
A Rilco Laminated Wood Products, Inc. 355
A Rixson, Oscar C. Company 336
Robbins Flooring Co. 368
A-IC Robertson, H. H. Company 378
A-LC Roddis Plywood Corporation 73–74
A-LC Rolscreen Company 278–279
A-IC Rotary Lift Co. 2–3
A Rubatex Division 77
A-IC-LC Ruberoid Co. 162
A-LC Russell & Erwin Division 254–255
A St. Charles Manufacturing Co. 266
Sarco Company, Inc. 325, 377
Sarcotherm Controls, Inc. 325
Sargent & Company 403
Sargent & Greenleaf, Inc. 361
A Schieber Sales Company 397
A Schlage Lock Company 75
Schundler, F. E., & Company, Inc. 84–85
A Seaporcel Metals, Inc. 67
A-LC SelecTemp Division Iron Fireman Mfg. Co. 159
Signal Engineering & Mfg. Co. 401
Silvray 356
A-IC Simplex Ceiling Corp. 395
Skylike Lighting, Inc. 356
A-IC Sloan Valve Company 4th Cover
IC Smith, A. O. Corporation 71
A Smithcraft Lighting Division 289
A-IC-LC Sonoco Products Company 387
A-LC Southern Sash Sales & Supply Co. 137
A Spanjer Bros., Inc. 392
A Speakman Company 136
Sperry Rand Corporation 393
Square D Company 81
Staedtler, J. S., Inc. 374
A Stanley Works 119
A-IC Stark Ceramics, Inc. 161
Stern, Chester B., Inc. 285
A-LC Sterling Hardware Mfg. Co. 25
A Summitville Tiles, Inc. 393
A Surface Coatings, Inc. 29
A Swedish Crucible Steel Company 105
A-IC Taylor, Halsey W. Co. 298
A-LC Thrush, H. A. & Company 306
A Tile Council of America 341
A Timber Structures, Inc. 379
A Titus Manufacturing Corp. 102–103
Trane Company 260–261
A Trinity White Division 288
Troy Laundry Machinery 272
A-LC Ualco Aluminum Window 137
Union Carbide and Carbon Corporation 127
A-IC United States Air Conditioning Corp. 142
United States Ceramic Tile Co. 294
A-IC United States Gypsum 328, 329
A United States Motors Corporation 304
A-LC United States Plywood Corp. 310–311–317
United States Steel Corp., Stainless Steel 296–297
IC United States Steel Corp. Subsidiaries 143, 148, 296, 297, 357
A Universal Atlas Cement Company 357
A Uvalde Rock Asphalt Company 287
Velocity Power Tool Co. 158
A Vermont Marble Company 343
Vickers Electric Division 395
A Vogel-Peterson Co. 400
Vogt, Henry Machine Co. 354
A Vonnegut Hardware Co. 126
Wallace, William Company 160
A-LC Ware Laboratories, Inc. 365
A Wayne Iron Works 157
A Weis, Henry Mfg. Co., Inc. 360
Western Pine Association 160
Westinghouse Electric Corp., Electric Appliance Div. 274–275
A Westinghouse Electric Corp. (Micarta) 317
A-IC Westinghouse Electric Corp., Water Coolers 300–301
A Wheeling-Corrugating Company 60–61
Whizzer Products Co. 374
A Williams Equipment and Supply Company 385
A Wing, L. J. Mfg. Co. 276
A-LC Woodco Corp. 335
A Worthington Corporation 292–293
A Wright Manufacturing Company 151
Yale & Towne Mfg. Co. 130
A-IC-LC Zonolite Company 367

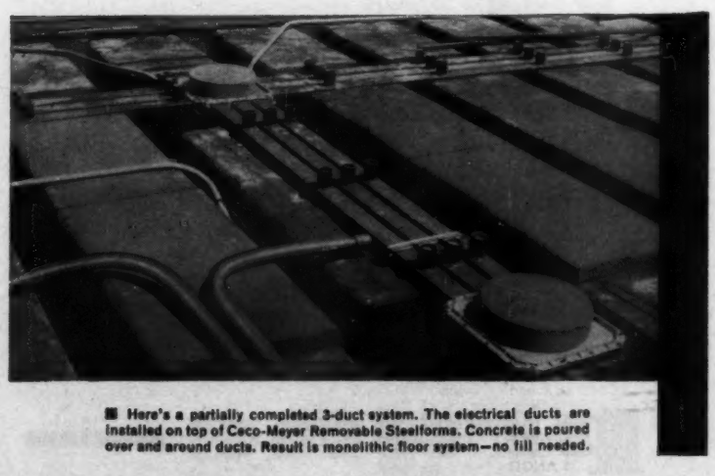
NEW YORK—H. Judd Payne, Publishing Director; Robert F. Marshall, General Manager, Tom Tredwell, Advertising Mgr.; Richard C. Crabtree, Sales Service Mgr.; Benton B. Orwig, Director of New Business Development; M. A. Murphy, Advertising Production Manager; Harry M. Horn, Jr.; James E. Boddorf, 119 W. 40 St., **BOSTON**—Harry M. Horn, Jr., 855 Park Square Bldg.; **BUFFALO**—Benton B. Orwig, 70 Niagara St.; **CHICAGO**—Claude B. Riemersma, Regional Sales Manager; Robert T. Franden, David K. Bortz, James A. Anderson, Charles L. Reed, Jr., 700 Merchandise Mart; **CLEVELAND**—John C. Jackson, Regional Sales Manager; Joseph F. Palmer, Louis F. Kutscher, 321 Hanna Bldg.; **LOS ANGELES**—Bob Wettstein, 672 South Lafayette Park Place; **MIAMI**—Benton B. Orwig, 802 N. W. First St.; **PHILADELPHIA**—Tom Tredwell, 1321 Arch St.; **PORTLAND**—Bob Wettstein, 921 S. W. Washington St.; **ST. LOUIS**—Claude B. Riemersma, Clifford M. Kelly, 721 Olive St.; **SAN FRANCISCO**—Bob Wettstein, Howard Bldg., 209 Post St.



National Education Association Bldg., Washington, D. C. • Architect: J. H. Saunders
Consulting Architects: Reisner & Urbahn • Structural Engineers: Beall & LeMay
General Contractors: Joseph F. Nebel Co.

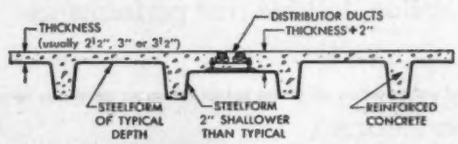
Yet the cost is 19% less due to Ceco-Meyer Steelform Construction

One of the prime necessities in buildings today is plenty of conveniently placed electrical outlets. And the most economical way to assure electrical flexibility is to build with reinforced concrete—with R/C Duct Floors provided by Ceco-Meyer Reinforced Concrete Joist Construction. That's how the problem was solved at the National Education Association Building, Washington, D. C., where R/C Duct Floors actually cost 60¢ per square foot less than cellular steel flooring, or a saving of 19%. In R/C Duct Floor construction, a network of steel electrical ducts is buried in the structural slab. Capped outlets every 2 feet along the ducts provide handy electrical connections for the telephones and business machines now in use. When expansion or re-arrangement is necessary, electrical equipment can be moved anywhere without costly rewiring or tearing up floors to provide electrical outlets. On your next building project, consult Ceco Engineers. They can save you money with R/C Duct construction—at the same time you get rigid Reinforced Concrete floors. (CECO STEEL)



■ Here's a partially completed 3-duct system. The electrical ducts are installed on top of Ceco-Meyer Removable Steelforms. Concrete is poured over and around ducts. Result is monolithic floor system—no fill needed.

Insist on the structural rigidity of reinforced concrete joists . . . insist on economy, too



Cross-section through distributor ducts, showing the strength and simplicity of R/C Duct Floors made with Ceco-Meyer Reinforced Concrete Joist Construction.

CECO STEEL PRODUCTS CORPORATION
Offices, Warehouses and fabricating plants in principal cities
General Offices: 5601 West 26th Street, Chicago 50, Illinois

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE

FOR NEW HOMES

OR MODERNIZATION

specify pryne...



tilting HOOD

with recessed FAN AND LIGHT

UL

UNION I.B.E.W. MADE



The new Pryne tilting hood is functionally designed for installation in new or existing cabinetry. Simplicity of installation reduces time and labor costs. 5 year service guarantee assures longer-lasting, trouble-free performance.

For modern beauty and design—specify Pryne!

- Exclusive! A flick of the fingers and the hood tilts for easy cleaning or removal!
- Exclusive! Angled corners allow cabinet doors to open wide on either side!
- Exclusive! No inside projections to catch dirt, dust, grease.
- Available in White Deluxe Enamel, Stainless Steel and Glazed Coppertone finishes.
- 3 standard models for installation with new or existing cabinets:
  - *#500—with space-saving self-contained Bio-fan and Pry-lite*
  - *#400—requires only 4" of space for light and fan housing*
  - *#300—low-cost builders special with Aerofan and Pry-lite*
- 4 standard lengths; others available on special order.

PRYNE & CO., INC. AH9
BOX 698, POMONA, CALIF.

Please send me additional information and specifications on the Pryne tilting hood.

Name_____

Company_____

Street_____

City_____ Zone____ State_____

pryne— rhymes with FINE

